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SONG'S



Dahlia-Flowered Zinnia, "*Crimson Monarch*"
Probably the largest and most wonderful
Zinnia in the world. Pkt. 25c; 5 Pkts., \$1.00

GARDEN BOOK

for 1924

THE J. D. SONG SEED COMPANY
BOULDER, COLORADO

SONGS

Giant Spencer Sweet Peas

Select varieties, in a wide range of colors, tints and shades. Edges of blossoms usually waved or frilled, giving an added charm to this popular flower.

Half-Ounce at Ounce Rate

SP0. AUSTIN FREDERICK. Many sweet pea fans consider this the best lavender to date. Extra large and fine. Pkt., 10c; oz., 40c.

SP1. BARBARA. Superb salmon. Pkt. 10c; oz., 35c.

SP2. BLANCHE FERRY. Pink and White Spencer. Pkt., 10c; oz., 30c.

SP3. BUTTERCUP. Best cream or primrose. Pkt., 10c; oz., 35c.

SP5. CONSTANCE HINTON. Finest exhibition White Spencer. Great prize winner. Slightly tinted pink upon opening, but turns pure white. Black stemmed, standing earlier planting than other whites. Pkt., 10c; oz., 40c.

SP6. COUNTESS SPENCER. The original Spencer. Clear pink. Pkt., 10c; oz., 30c.

SP7. DAINTY. White with picotee edges. "Dainty is right." Pkt., 10c; oz., 35c.

SP8. EDWARD COWDY. Glowing orange-scarlet. Pkt., 10c; oz., 40c.

SP9. ELFRIDA PIERSON. Large and lovely shell pink, tinted salmon. Pkt., 10c; oz., 30c.

SP11. HAWLMARK PINK. New. Rich, bright, rose-pink, flushed salmon. The richest colored sweet pea. Pkt., 10c; oz., 50c.

SP12. HERCULES. Mammoth rosy pink. Improved Countess. Pkt., 10c; oz., 40c.

SP14. KING EDWARD. The finest pure red Spencer. Does not burn in sun. Pkt., 10c; oz., 30c.

SP15. MRS. HITCHCOCK. New. Pale pink, flushed salmon on cream ground. Pkt., 10c; oz., 40c.

SP16. KING WHITE. Large blossoms of purest, glistening white. Pkt., 10c; oz., 30c.

SP17. LORD NELSON. Splendid navy blue Spencer. Pkt., 10c; oz., 30c.

SP19. MARGARET ATLEE. (Improved) Extra large flowers of rich glowing pink, softly suffused with salmon. Extra fine. Pkt., 10c; oz., 40c.

SP20. MARKS TEY. Maroon standard, bluish wings. Large. Pkt., 10c; oz., 50c.

SP21. MASTERPIECE. Large clear lavender, slightly flushed rose. Pkt., 10c; oz., 50c.

SP22. MRS. TOM JONES. New. Bright delphinium blue. Pkt., 10c; oz., 40c.



SP23. NUBIAN. Deep maroon. Pkt., 10c; oz., 30c.

SP24. ORCHID. Lavender, suffused pink, suggesting the rich tone of the Cattleya orchid. Pkt., 10c; oz., 30c.

SP25. PICTURE. New. Enormous flowers on long stems, exquisitely frilled. Cream and pink shades, blended, with deeper flush on wings. Vigorous grower. Received award of Merit from Royal Horticultural Society of England. Pkt., 10c; oz., 50c.

SP28. ROYAL PURPLE. Rich rosy purple. Large and fine. Pkt., 10c; oz., 40c.

SP29. ROYAL SCOTT. New. True scarlet, outshining all other scarlets to date. Received award of merit from Royal Horticultural Society of England. Pkt., 10c; oz., 50c.

SP31. THE CARDINAL. Intense poppy scarlet. Extra fine. Pkt., 10c; oz., 50c.

SP33. WEDGEWOOD. Unique shade of lovely light blue. A favorite. Pkt., 10c; oz., 30c.

SP34. TANGERINE IMPROVED. New. Deep orange, almost the color of tangerine-orange. Flowers large and beautifully waved. Finest of its color. Pkt., 10c; oz., 50c.

LONG'S Famous Spencer Sweet Peas

"Early Bird" Spencers

Real Spencer sweet peas, of large size, beautifully waved, that begin blooming nearly a month earlier than other Spencers, or the common kinds. Under favorable conditions, and if kept closely picked, they continue to bloom all summer.

These new "Early Bird" Spencers are the kind the florists grow in greenhouses, but they do splendidly in the open garden also. Order some "Early Birds" along with your usual sweet pea favorites and try them out. They'll surprise you some morning by showing color much sooner than you have been used to looking for first sweet pea blossoms.

Here's a selected list of extra fine "Early Bird" varieties.

- SP80. AMETHYST. Royal purple.
- SP82. AVIATOR. Dazzling crimson-scarlet.
- SP83. GLITTERS. Orange-scarlet.
- SP84. LAVENDER KING. Clear lavender.
- SP86.—ROSE QUEEN. Soft rose-pink.
- SP88. SNOWSTORM. Pure snow-white.
- SP90. "EARLY BIRD" Spencers. Mixed.

Price for any above color, or mixed, pkt., 15c; 2 pkts., 25c; 5 or more pkts. at 12c each; ½ oz., 40c; oz., 75c.

LONG'S "33-in-1" Spencer Mixture

SP41. In this mixture you get the best of up-to-date Spencers. I use 33 different named varieties. Of course you might not get all 33 kinds in a 10-cent packet—possibly not in an ounce—but they are all in this mixture. It is my ambition to make this the finest Spencer mixture offered this season. Pkt., 10c; oz., 30c; 2 oz., 50c; ¼ lb., 90c; lb., \$3.50.

Grandiflora Sweet Peas

SP55. These are the Sweet Peas universally grown until recent years. They are fine, but Spencers are still better. Mixed colors. Pkt., 5c; oz., 10c; ¼ lb., 30c; lb., 90c.

"Lovely 'Leven" Spencers

'Leven 10c Pkts., 75c

The "Lovely 'Leven" assortment I offered last season for the second time was such a "howling success" that I'm going to repeat the offer this season, AND REDUCE THE PRICE.

From over 25 of my splendid named varieties of giant Spencers, I'm going to select eleven that will cover practically all the main colors, tints and shades, giving you a regular 10-cent packet of each these "Lovely 'Leven." Then just for good measure, I'll throw in a 10-cent packet of my "33-in-1" mixed Spencers, and make the price only 75 cents for all.

Please note carefully that to get this special price you must take the assortment as it is put up. You cannot specify certain varieties at this price. These assortments will be put up in advance—a lot of them—ready to send out without any further attention. Just say, "Lovely 'Leven" for 75c, and you will get our own assortment, which will indeed be lovely.

Larger Lot "LOVELY 'LEVEN." For \$1.50 I will send you a half ounce each of these Spencers, my selection, with half an ounce "33-in-1" mixed Spencers thrown in for luck.

LONG'S Special Mixture

SP43. My mixture that has given such splendid satisfaction for a moderate price. It includes the best of the grandiflora varieties, a "right smart" of Spencers, and a sprinkling of extra early kinds, the latter coming so early that they spring a delightful surprise on you before you are looking for first blossoms. Pkt., 10c; oz., 15c; 2 oz., 25c; ¼ lb., 40c; lb., \$1.35.

SP39. CUPID SWEET PEAS. Mixed. Pkt., 5c; oz., 20c.

Perennial Peas

Hard to germinate, but once started live for years.

SP60 White. SP61 Pink. SP62 Mixed. Pkt., 10c; oz., 50c.

Many Spencers Included In **LONG'S** Special Mixture

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D. W. Shorttaker

MAR 24 1924

LONG'S Safety-first Lawn Grass Seed

Tried and True—Best for You

It is safest and cheapest to buy the very purest and best White Clover and Blue Grass seed for your lawn, because: You avoid seeding your lawn with the noxious weeds found in cheap grass seeds, and get so much higher germination that a pound of the best will cover as much as two pounds of the cheap, chaffy, low germinating seed.

Purest White Clover

Clean seed, of bright golden color and strong vitality, "rarin' to go." Sure fine.

Lb., 80c, prepaid. Five Lbs.: 2nd zone, \$3.80; 3rd zone, \$3.85; 4th zone, \$3.95; prepaid.

Best Kentucky Blue Grass

Very heavy and clean. Lb.: 60c prepaid. Five Lbs.: 2nd zone, \$2.60; 3rd zone, \$2.65; 4th zone, \$2.75; prepaid. Ten Lbs.: 2nd zone, \$5.00; 3rd zone, \$5.10; 4th zone, \$5.25; prepaid. Write for prices on larger lots and beyond 4th zone.

Note. The Government standard germination of Blue Grass Seed is 45 to 50%. My recleaned, heavy, purest seed tests 75 to 90%. Lots of Blue Grass Seed is sold testing 40% or less.

Safety-First Mixed Seed

One part white clover to about three parts blue grass. Lb.: 70c, prepaid. Five Lbs.: 2nd zone, \$2.95; 3rd zone, \$3.00; 4th zone, \$3.10. Ten Lbs.: 2nd zone, \$5.20; 3rd zone, \$5.30; 4th zone, \$5.40. Sow about one pound to 350 square feet. If want mixed in other proportion, buy the clover and blue grass separately and mix them yourself.

How to Grow Dandelions!

Dandelions thrive well on front lawn with street exposure. Nature supplies the seed, gratis. After the plants are well started dig a part of the roots out, cutting them off just a little below the surface. This causes the roots to branch, sending out new shoots of luxuriant growth. Thus you make two or more dandelions grow where but one grew before. Avoid cutting too deep or extracting more than half the root, lest you ruin the plant.

Do not sow blue grass or white clover on your lawn after digging if you want the floating dandelion seed to lodge and take root wherever the ground has been disturbed. Avoid, also, raking the lawn and sowing pure grass seed from March to September. While the grass seed may not entirely run out the dandelions, it will at least cause a week and sickly growth of them.

Sowing cheap, light-weight blue grass seed is a harmless practice, as little will grow and most of it will blow away. But with white clover seed it is different. Most cheap white clover seed contains a large per cent of plantain seed and the plantain will choke out the whole works, dandelions, grass and all. It is almost impossible to get ride of the plantain.

To keep a green lawn and discourage dandelions sow grass seed every year, several times during the season is a good plan. Pure blue grass and white clover are the best grasses. Buy a good dandelion rake and exercise it daily.

How to Make and Maintain a Good Lawn

New lawns may be started or old ones renewed or renovated any time from earliest spring to October.

A mixture of good lawn seed and horse sense will go far to insure a good lawn. New lawns should be thoroughly worked, leveled and allowed to settle, then leveled again. The more care you give the lawn along this line before sowing the seed the better results you will have. Seed will wash to the low spots and make your lawn spotted. Some will complain that the seed was not good as came up only in spots. Sow about one part clover to three parts blue grass.

Sow part the seed one way and then sow some more crosswise, so as to avoid streaks. Rake well before and after sowing. Save some seed for sowing in spots that fail to come thick enough. Water gently but thoroughly so often that soil never dries out until seed is up. Clover comes quickly. Blue Grass comes slowly but hangs on like grim death after once gets a foothold. Clover draws nitrogen from the air and enriches the ground for itself and the Blue Grass.

Old lawns should be re-seeded and fertilized from time to time. Use only the purest seed. Five pounds bone meal to 100 square feet is good in spring or summer. Rotted barn-yard manure is O. K. if applied in winter or early spring. See also suggestions above.

LONG'S Beautiful, Bountiful, Brittle Beans

All are brittle when young. Nos. 3, 4 and 7 are tender and stringless until pretty well matured. All but V9 are bush varieties. All are priced prepaid.

For larger lots, see page 22.



Burpee's Brittle Wax

V1. The name tells the story. If I were to suggest any other name it would be **Icicle**, for the pods break like icicles, with hardly ever a sign of string, even when full grown. The flavor is best ever. Yield good. What more could one wish?

From introducer's stock, I've been growing this wonderful bean five years, over on the Western Slope, at an altitude of 6,000 feet, and now have extra fine acclimated seed, matured to perfection, glistening as though each bean hand-polished. The long, round, fleshy pods are a beautiful yellow.

Beans long, white with black eye. Good as shell beans also. Pkt., 10c; $\frac{1}{2}$ lb., 20c; lb., 35c. **SPECIAL: 3 lbs., \$1.00, prepaid.**

V3. DWARF BLACK WAX. Beans black; pods yellow. Vines short. Pkt., 10c; $\frac{1}{2}$ lb., 15c; lb., 25c.

V4. SURE CROP WAX. Tender yellow pods; beans black. Fine. Pkt., 10c; $\frac{1}{2}$ lb., 15c; lb., 25c.

V6. WARDWELL'S WAX. Very large; heavy yielder. Market variety. Pkt., 10c; $\frac{1}{2}$ lb., 15c; lb., 25c.

V7. BURPEE'S STRINGLESS GREEN POD. Might be called a green pod "Brittle Wax." Beans brown. Pkt., 10c; $\frac{1}{2}$ lb., 18c; lb., 30c.

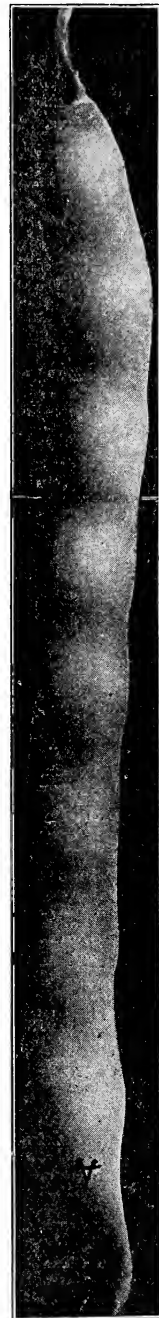
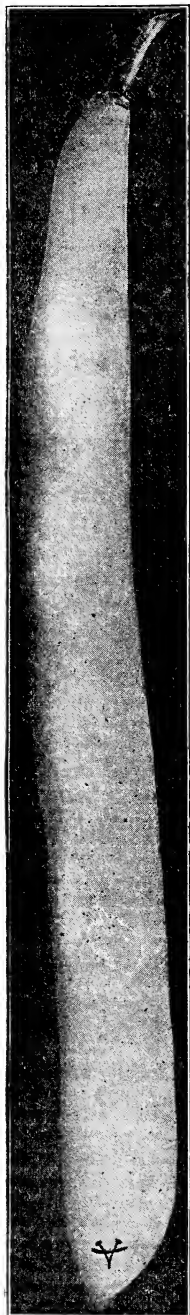
V8. FULL MEASURE. Much like B. Stringless Green Pod. Equal to it in every way, but surpassing it in color, shipping and canning qualities. Pkt., 10c; $\frac{1}{2}$ lb., 18c; lb., 30c.

V9. KENTUCKY WONDER POLE. The favorite pole bean. Pkt., 10c; $\frac{1}{2}$ lb., 18c; lb., 30c.

V10. COLORADO CREAM BUTTER. (Aztec.) Immense white bean, shape of navy, with lima flavor. Pkt., 10c; $\frac{1}{2}$ lb., 15c; lb., 25c.

V11. HENDERSON'S LIMA. Pkt., 10c; $\frac{1}{2}$ lb., 15c; lb., 25c.

V12. FORDHOOK LIMA. Large, juicy and sweet "butter bean." Pkt., 10c; $\frac{1}{2}$ lb., 20c; lb., 35c.



LONG'S "Live Beets"

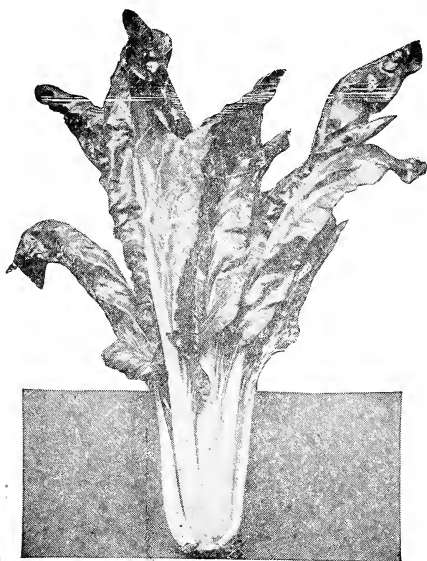
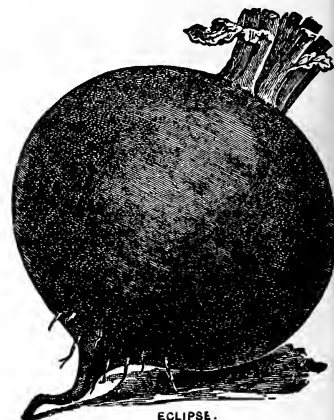
V14. EARLY WONDER. A splendid extra early variety that is meeting with great favor. This quick growing, attractive variety is of the favorite globe shape. The flesh is dark red, sweet and tender. Fine for summer and fall use, canning, or storing for winter. Select seed. Pkt., 10c; oz., 20c.

V16. CROSBY'S EARLY EGYPTIAN. Preferred now by most gardeners to the old flat type Egyptian. Uniform turnip shape; flesh deep red; quick growing. Small Pkt., 5c; Large Pkt., 10c; oz., 15c.

V17. EARLY ECLIPSE. Similar to Early Wonder and Crosby's in season and shape, but flesh a brighter red, preferred by some. Small Pkt., 5c; Large Pkt., 10c; oz., 15c.

V18. DETROIT DARK RED. Globe shape; smooth; dark red; tops small, admitting of close planting. Good all around early, medium or late variety. Splendid for canning when small. "Can you beet it?" Small Pkt., 5c; Large Pkt., 10c; oz., 15c.

V19. BLOOD TURNIP. Discontinued. Use Detroit.
For larger lots, see page 22.



LONG'S "3-in-1" Vegetable

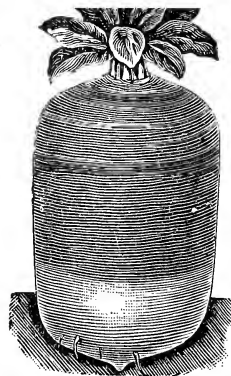
SWISS CHARD—Alias Spinach Beet, Asparagus Beet, "Chicken's Delight." Leaves may be cooked for "greens" like spinach. The stalks may be cut lengthwise and crosswise, the quartered pieces then boiled and served in butter or milk dressing like asparagus. Grow plenty and feed surplus to the chickens. They like Swiss Chard and thrive on it. Don't dig up the root or cut off all the top. Pull off the outside stalks. Others will keep forming from heart of plant. Grows in hot weather when spinach lies down on the job. Stands a lot of freezing in fall and still keeps growing. Really a wonderful vegetable. Add it to your list. Pkt., 5c; oz., 15c; ¼ lb., 40c.

HOW TO GROW "LIVE BEETS"

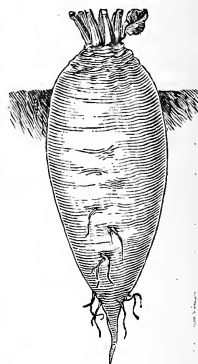
Culture. Plant any time from early spring to August. Most people make a mistake by not planting beets along in summer, as well as in spring. They come quickly, the small half-grown size being best for canning and fine for summer use also. An ounce of seed will sow 50 feet of row. Cover ¾ inch.

Mangels, Sugar Beets

Culture. Sow 4 to 6 lbs. to acre, in rows 24 inches apart. In good ground you can raise 30 to 40 tons per acre. Very valuable for feeding stock, especially milch cows. A mixture of mangels and sugar beets is good combination. Add carrots for dessert!



Golden Tankard



Sugar Beet

Prices: All Mangels, also **LONG'S** Special Mixture of Mangels and Sugar Beet: Pkt., 5c; oz., 10c; ¼ lb., 25c; lb., 60c; 5 lbs., \$2.50; 10 lbs., \$4.40, prepaid. Ask for prices on larger lots.

V22. MAMMOTH LONG RED. Great yielder

V23. GOLDEN TANKARD. Roots rather short

V24. DANISH SLUDSTRUP. Ovoid shape reddish-yellow; heavy cropper.

V25. GIANT HALF SUGAR.

V26. WANZLEBEN SUGAR BEET. The standard sugar beet. Extra good seed; true strain. Pkt., 5c; oz., 10c; ¼ lb., 25c; lb., 60c

LONG'S Special Mixture

V27. A well-balanced mixture of Mangels and Sugar Beet, for milk cows. Mixed by myself from our tested seed. Better than all Mangels or all Sugar Beet. Pkt., 5c; oz., 10c; ¼ lb., 20c; lb., 50c; 5 lbs., \$2.25; 10 lbs., \$4.00.

LONG'S Cabbage—Best Kinds for Home and Market

Culture: For early plants start seed in box, cold-frame or hot-bed. For main crop sow seed in garden. Transplant where wanted. Cabbage responds to very frequent cultivating and hoeing. Set early plants April and May. For winter use set plants in June.

PRICES: Except Copenhagen Market and Round Head, all at: Small Pkt., 5c; Large Pkt., 10c; oz., 25c. For larger lots, see page 22.

V28. WINNINGSTADT. Heads firm, slightly pointed, standard early sort, but good also for winter.

V29. EARLY JERSEY WAKEFIELD. Small, pointed head. Very early.

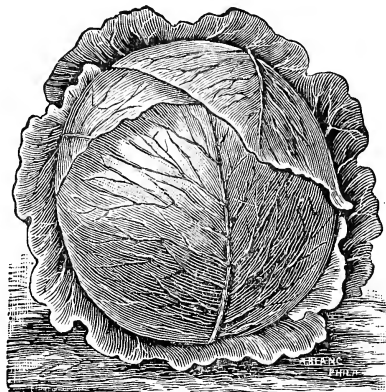
V30. ENKHUIZEN GLORY. About same season as Winningstadt, but head is round instead of pointed. Yields heavy crop and does well even on rather poor soil.

Special Notice: All my seed of Copenhagen Market and Danish Round Head comes direct to us, in sealed bags, from the originator of the famous Copenhagen Market cabbage, at Copenhagen, Denmark. None better in the world that I know of.

V31. COPENHAGEN MARKET. See description below. Originators' stock. Pkt., 10c; oz., 40c.

V34. LATE FLAT DUTCH. An old variety but still a favorite with many. Very large.

No Cabbage Plants by Mail.



V35. DANISH ROUND HEAD. (Short Stemmed Hollander.) One of the best main crop varieties. Heads very solid; good keeper. This is the main variety grown by large gardeners and shippers for fall and winter use. It's the standard best late cabbage. **LONG'S** special stock Danish grown seed. Pkt., 10c; oz., 35c.

V36. MAMMOTH ROCK RED. Large sure-heading red cabbage.

V37. SAVOY CABBAGE. Leaves beautifully crimped. Finest flavor.

V38½. BRUSSELS SPROUTS. Miniature cabbages; grow closely on stalks. Oz., 30c.

CHINESE, or CELERY CABBAGE

V39½. Tastes more like lettuce than cabbage or celery. Early plants often run to seed. Sow in June. Tie up like cauliflower to blanch. Oz., 35c; ¼ lb., 90c.

**LONG'S Copenhagen Market—Best Early Round Head**

It's growing in favor every year, not only the best Early Round Head Cabbage, but also as a splendid sort for winter, when planted a little later than the winter varieties. The dish-shaped leaves fold so tightly, and the heads are so solid, that it can be grown closer together than other kinds of equal weight. Heads often weigh 10 lbs.

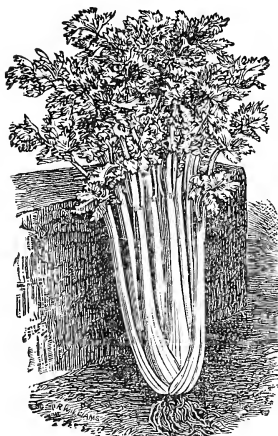
LONG'S Cauliflower

V38. EARLY SNOWBALL. (Henderson's strain.) Early and main crop variety.

V39. DRY WEATHER. Very large, and fine white heads. Resists drought well. Some gardeners prefer this to Snowball and grow it exclusively.

Price for either variety: Pkt., 10c; $\frac{1}{4}$ oz., 50c; $\frac{1}{2}$ oz., 90c; oz., \$1.50; $\frac{1}{4}$ lb., \$5.50.

No Cauliflower Plants by Mail.

LONG'S Celery

Culture. Sow in protected bed; sow thin and cover lightly. Transplant in June. Ask your County Agent or Agricultural College for special information on celery growing.

V44. GOLDEN SELF-BLANCHING. One of the best early kinds for fall use. Pkt., 10c; $\frac{1}{2}$ oz., 30c; oz., 45c; $\frac{1}{4}$ lb., \$1.50.

V46. GIANT PASCAL. The best late celery for winter use. May be blanched in garden, but to get those brittle sweet white stalks it

should be taken up, trenched or banked up in colors so as to grow new stalks from the old roots. Pkt., 10c; $\frac{1}{2}$ oz., 25c; oz., 40c; $\frac{1}{4}$ lb., \$1.20.

V45. WHITE PLUME. Preferred by some to Self-Blanching. Fall variety easily blanched. Pkt., 5c; $\frac{1}{2}$ oz., 25c; oz., 45c.

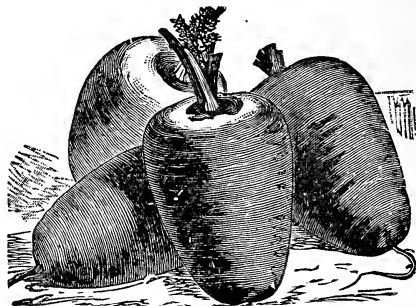
V47. CELERIAC, or TURNIP-ROOTED CELERY. Little known, but fine for seasoning meats and soups, also for salads. Grown exclusively for its turnip-shaped roots. Pkt., 5c; oz., 25c.

LONG'S Asparagus

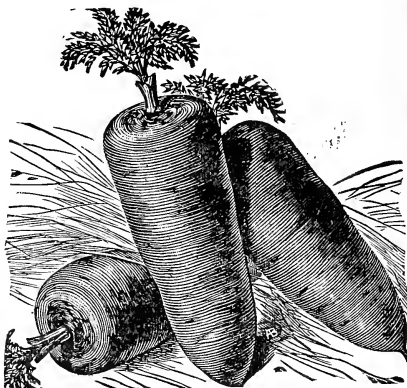
Seed: Pkt., 10c; oz., 15c; $\frac{1}{4}$ lb., 30c.
Roots: 12 for 50c; 36 for \$1.00; 100 for \$2.40, prepaid.

LONG'S Best Four Carrots

Prices: All at: Small Pkt., 5c; Large Pkt., 10c; oz., 15c. For larger lots, see page 22.



V40. OXHEART. Short but thick roots, bright orange flesh; best for heavy soil; good table sort and all right for stock also.



V41. DANVERS HALF LONG. Smooth medium length, orange color roots. A standard for table or for stock. Heavy yielder.

V42. CHANTANEY. Similar to Danvers but not quite so long; fine grained and sweet.

42 $\frac{1}{2}$. NANTES. An extra sweet table carrot. Roots do not taper much, but are almost cylindrical, about 6 inches long, and very smooth. Flesh orange-red, very sweet, and almost without core. Just fine. Try it. Pkt., 10c; oz., 20c; $\frac{1}{4}$ lb., 50c; lb., \$1.40.

V43. GIANT WHITE BELGIAN. Grows one third out of the ground, top somewhat green and portion under ground white.

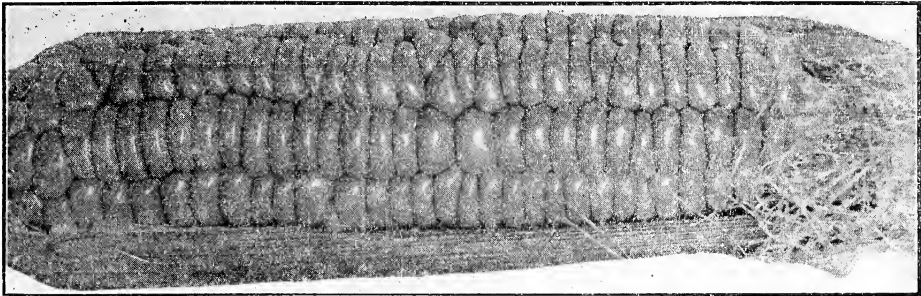
Parsley

Culture. Soak seed in tepid water a few hours before planting. Cover 1 inch.

V125. DARK MOSCULLED. Fine for garnishing. Pkt., 5 oz., 15c; $\frac{1}{4}$ lb., 50c.



LONG'S Acclimated SWEET CORN Seed



LONG'S Early "Peep O' Day"

V48. It's the early bird. Stands early planting and hustles right along as though knew how eager we are for first roasting ears of the season. Originally this variety was quite small, but my Colorado grower has been selecting for size, and you will find a decided improvement in size of this favorite early corn. A money-maker because people will pay almost any price for first roasting ears on the market. Size is not so important then as later in the season. Select, thoroughly matured, Colorado seed.

LONG'S Improved Golden Bantam

V49. If you plant just one kind of Sweet Corn, then make this the one. My Colorado strain has been improved the same as my Peep O' Day, by selection year after year, so that my stock now runs considerably larger than the regular Golden Bantam. Instead of just 8 rows, many ears will have 10 and 12 rows. One of the many good points about Bantam is that the silks or "whiskers" come out easily and leave a nice clean ear for cooking, while its special advantage over other varieties always has been and always will be its sweetness. In this it delivers the goods.

LONG'S New Giant Bantam

V50. Known also as Bantam-Evergreen, from crossing of these two splendid varieties, combining to a large degree the sweetness of Bantam and the size of Evergreen—a splendid combination. Try this in place of Evergreen, or plant part each.

LONG'S Golden Cream

Another addition to the Golden Bantam family. Cross between Bantam and Country Gentleman, having size, deep grains and zig-zag appearance of the latter, but more the color of Golden Bantam. A strong recommendation for Bantam is its being crossed with other kinds to improve them.

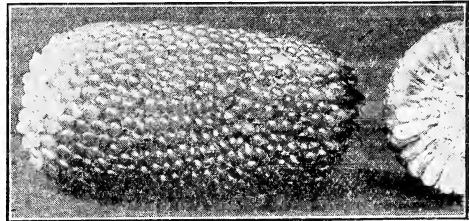
V53. STOWELL'S EVERGREEN. The standard big late Sweet Corn.

V54. COUNTRY GENTLEMAN. Tall, late, very sweet, with grains set zig-zag.

Several varieties discontinued. "Plant the best. Forget the rest."

Prices: All Sweet Corn at same price: Large Pkt., 10c; ½ lb., 18c; lb., 30c, prepaid. For larger lots see page 22.

LONG'S Japanese Rice Pop Corn



Ears are short and "stubby," but so "heavy sot" or big around that the yield is something astonishing. Each stalk has several good ears. Some ears have 32 rows. Grains very deep and slim. Hulls so thin and transparent that the Pop Corn just melts in your mouth.

Price: Pkt., 10c; ½ lb., 20c; lb., 30c.

Two Other Good Kinds

V56. WHITE RICE. Small pointed grains. Kind used by the Pop Corn wagons in cities. Pkt., 5c; ½ lb., 15c; lb., 25c; prepaid.

V57. MAMMOTH WHITE, or SPANISH. Extra large, sweet and tender. Great seller. Usually sells on cob in grocery stores. Extra early. Pkt., 5c; ½ lb., 15c; lb., 25c; prepaid.

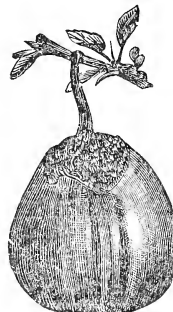
EGG PLANT

Culture. Start plants in box or hotbed. Do not set out until quite warm weather. Very tender. Ground should be rich.

V68. BLACK BEAUTY. An early improved variety. Pkt., 10c. ½ oz., 30c; oz., 50c.

NO PLANTS

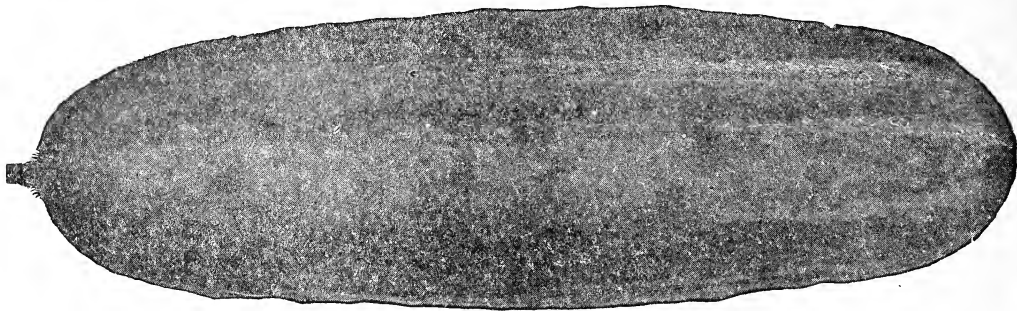
Am not lined up to supply Egg Plant plants this season.



MUSTARD

V123½. OSTRICH PLUME. Leaves long, ruffled and curved. Cook it like spinach. Pkt., 5c; oz., 10c; ¼ lb., 30c.

LONG'S Cucumbers—Best Pickling and Slicing Kinds



Culture. Plant (May and June) in hills a few feet each way. Most varieties are good for pickles when small or will do for slicing if left to grow larger. Early Fortune is especially good for either pickling or slicing.

Prices: All CUCUMBERS at: Small Pkt., 5c; Large Pkt., 10c; oz., 15c. For larger lots see page 22.

V60. KLONDIKE. Very early strain of white spine type with dark green skin.

V61. EARLY FORTUNE. Fine for pickles when small, and good slicer if allowed to grow to large size. Fruits very uniform.

V62. EARLY WHITE SPINE. An old favorite, still good.

V63. BOSTON PICKLING. Standard for pickles. Same as Boston Pickling.

V64. IMPROVED LONG GREEN. Always good.

V65. DAVIS PERFECT. So nearly perfect in shape that often brings extra price in the market. Very good.

V67. WEST INDIA GHERKIN. Small "cuc," 2 to 3 inches. Used for pickles. Seeds very small. Pkt., 5c; ½ oz., 15c; oz., 25c.

LONG'S Head Lettuce



Prices: All varieties LETTUCE (except V72): Small Pkt., 5c; Large Pkt., 10c; oz., 15c. For larger lots see page 22.

V70. IMPROVED HANSON. Good heading variety and may also be used as leaf lettuce when young.

V71. ICEBERG. Similar to Hanson. Crisp and tender. Fine as leaf lettuce also.

V73. BIG BOSTON. Popular market variety.

V74. MAY KING. Extra early.

V75. DENVER MARKET. Rather loose head; leaves light golden green, beautifully savoyed or crimped.

V76. EARLY PRIZE HEAD. Forms large loose head. Leaves crimped; tinged brownish-red. Tender, crisp and sweet.

V79. COS, or CELERY LETTUCE. Do not confuse with celery cabbage. It is one of the surest blanching varieties, of elongated or cone-shaped form. The outer leaves overlap so that the inner ones are blanched.

Mountain Head Lettuce

Long's Special Stock

V72. NEW YORK. Also called Los Angeles, Wonderful, Mountain Iceberg, and Western Iceberg. May have several more names by the time this catalogue gets into your hands.

Don't pay extra for new, high sounding names. If you want to grow the best head lettuce of this type, then get the best seed of the genuine New York, no matter whether it is listed as this or given some new name. I formerly listed this as Los Angeles, explaining that it is identical with New York, but as most growers are more familiar with the name New York, I'm using the name New York first, with the explanation following it.

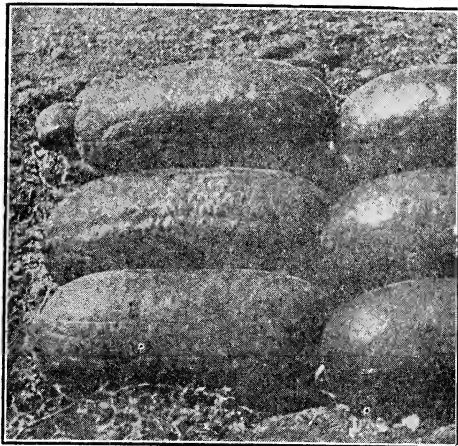
For years I've supplied many of the largest and most successful growers of Colorado Mountain Head Lettuce with this special high grade strain. It is grown for me by a lettuce seed grower in California who has specialized in this for 15 years, and developed an ideal type that is demanded by successful growers. Supply very short this season. Pkt., 10c; oz., 30c; ¼ lb., 90c; lb., \$2.70; 5 lbs. for \$12.00; 10 lbs. for \$22.50, prepaid.

There are tons of inferior seed of New York lettuce in the country that will be offered for sale this season. The wise grower considers quality first.

LONG'S Leaf Lettuce

V77. BLACK SEEDED SIMPSON. Grows quickly, making fluffy loose bunch of tender creamy leaves of delicate flavor. Fine.

V78. GRAND RAPIDS. Makes large compact bunches of light green leaves with fringed edges. The kind to grow in hothouses and hotbeds or coldframes. Splendid for open garden also.

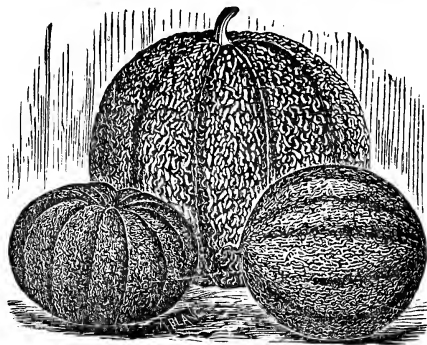
LONG'S Water Melons**Kleckley's Sweet or Rocky Ford****LONG'S "Favorite Four"**

From a large list, many of them all right for the South, but not very desirable for our section. I have selected these three as "Best for the West."

V92. KLECKLEY'S SWEET. The skin is dark green, flesh bright scarlet, ripening close to the skin. Seeds lie close to rind, leaving a large solid heart which does not crack open when ripe. The scarlet flesh is sweet and sugary and of such texture that it leaves no strings of pulp whatever in eating. Is so exceptionally good that I feel it should head any list of melons offered. Pkt., 5c; large pkt., 10c; oz., 15c.

V93. TOM WATSON. Similar to Kleckley's Sweet, but still larger, and firmer, standing shipping and handling the best of any first-class melon. The rind is thin but tough; flesh bright red, delicious, sweet and satisfying. Pkt., 5c; large pkt., 10c; oz., 15c.

V94. ICE CREAM. Fine, very sweet, early melon for home or home market. Will not stand rough handling or shipping. Pkt., 5c; Large Pkt., 10c; oz., 15c.

LONG'S Musk Melons

V80. ROCKY FORD. The original, well-known, green meated strain. Pkt., 5c; large pkt., 10c; oz., 15c.

V83. POLLOCK No. 10-25, SALMON TINT. The best Rocky Ford cantaloupe. Heavily netted; cuts with golden center, shading to emerald green near the rind. Pkt., 10c; oz., 15c.

V85. EMERALD GEM. Small, early salmon flesh melon, fine grained and sweet, but poor keeper. Pkt., 5c; large pkt., 10c; oz., 15c.

V86. BURRELL'S GEM. Larger, longer and firmer than Emerald Gem. Rather late. Pkt., 5c; large pkt., 10c; oz., 15c.

V88. HONEY DEW. Large late melon that ripens after being picked and stored, if season too short for maturing in field. Salmon flesh. Pkt., 5c; large pkt., 10c; oz., 15c.

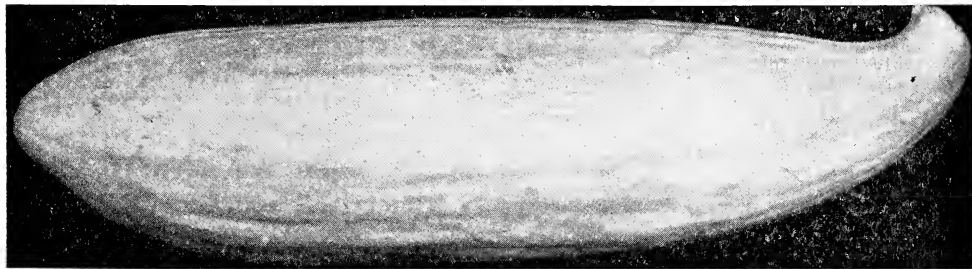
V89. HONEY DEW. Same as V88, but flesh green. Pkt., 5c; large pkt., 10c; oz., 15c.

V81. BAY VIEW. Large, long, early musk melon; flesh green. Pkt., 5c; oz., 15c.

V90. GARDEN LEMON. Very small. For pickles and preserves. Pkt., 5c; oz., 20c.

V84. COLORADO CITRON. Used for preserves. Pkt., 5c; oz., 15c; ¼ lb., 35c.

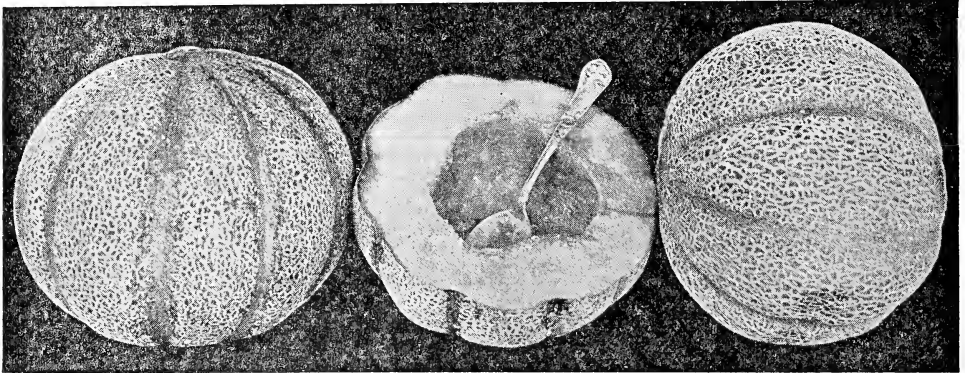
For larger lots, see page 22.

**Yes, We Have No Bananas**

V88. Here's another musk melon that seems to be appreciated more from year to year. Is not a new variety, but may be new to some of you. Is called the Banana muskmelon, since its shape resembles a banana, as you will note in this photo I had taken

of a sample brought in by Mr. Selby, another good customer out east a few miles. Not all resemble so closely the banana. Shapes vary, but this is the general type. They sometimes grow quite large, up to 28 or 30 inches long. Does not take a great stretch of the imagination to credit this melon with the flavor as well as shape of a good banana. Pkt., 5c; large pkt., 10c; oz., 15c.

LONG'S GREELEY WONDER MUSK MELON



LONG'S Greeley Wonder Melon—"Sweet as Honey"—Sure "Yum-Yum"

How time flies! Doesn't seem like eleven years since I was up around Greeley, Colorado, looking over my seed crops there, just in the melon season.

On the ranch of my good friend, G. J. Hafendorfer, I ran across a musk melon that I'd never seen before. Never heard of such a melon. Never believed there could be such a melon. Hardly believed it after seeing and sampling it liberally.

It was so large, so sweet and luscious, and yet so extremely early that I felt like Uncle Hiram at the circus, who, seeing the giraffe, declared: "Gawsh-all-hemlock, there hain't no sich animule!"

Sez I to myself, sez I: "Here's something I must get for my customers." Asked "Haf" where he got this melon, and what he called it. Then came another surprise. He didn't know where it came from, and it didn't have any name. Said it was originated some years before by a Greeley gardener, but no one seemed to know just to whom the honor belonged. Greeley gardeners had been growing it for some years, getting the seed from each other, but it had never, to their knowledge, been grown anywhere else. (Some called this the Lansdale, others referred to it as the Steele melon.)

As for its origin, the plot thickens, the more I try to follow it. Up to date I have heard of four different Greeley old-timers who each claim the distinction of originating this truly wonderful melon.

However, this is not the important point. Nor is the next point I shall mention important, but I'm just human enough to feel proud of the fact—and maybe get chesty and brag a little about it—that I myself took this in hand, named it Greeley Wonder, and was the first seedsman to offer it outside the Greeley district. In fact, I hollered about it several years before anyone else in the business sat up and took notice. But, as the merits of Greeley Wonder have become known, the demand has increased by leaps and bounds. Last year there was what you might call a landslide for it. Greeley Wonder just about had the right of way wherever it came in competition with other musk melons and cantaloupes.

You'll just have to sample a good ripe Greeley Wonder, to know exactly what it's like, but this description may help some: It's a big, almost round, melon, as shown above, usually heavily netted. As usually grown,

each melon weighs from 4 to 6 pounds, but good growers pick them up to 8 and 10 and even 12 pounds. The flesh is salmon colored and very sweet. One slice calls for another.

Ordinarily, to get earliness we must sacrifice either size or quality, or both. To get size and quality we must be content to wait until later in the season. But the wonderful thing about this melon is that it has all the splendid qualities I have mentioned, and to top it off, is extra early, coming in ahead of the well-known, smaller, Rocky Fords and many others. Think what this means for home or market! You get your melons when people are on tiptoes, waiting for the first home-grown ones to show up. Market gardeners please their customers, and cash in at a good price before Jack Frost gets a look-in, and everybody is happy.

Greeley Wonder does have one fault. Seems like nothing can be just perfect, you know. It is not tough enough to be a long distance shipper. It keeps a few days in good shape, but must be handled with care. This, however, is not serious for the home garden or for marketing within 100 miles or so. Greeley growers ship and truck thousands of these melons to the Denver markets. Denver "just eats 'em up" and keeps hollering for more.

Greeley Wonder is a shy seeder, and the great trouble has been to get sufficient good seed. As the introducer of this melon, it has been my ambition to supply only the best seed. My seed saved from selected melons, not from the "leavin's" after picking season. **V91. Price:** Pkt., 10c; oz., 25c; ¼ lb., 70c; lb., \$1.80; 3 lbs., \$5.00; 5 lbs., \$8.00, prepaid.

Best for the West

Tried and True seeds are not only Best for the West, but are making friends all over the country, and in several foreign lands. With almost no effort on my part, our circle is growing larger and larger, so that now we often get orders in the same mail from California, Alabama, Massachusetts, Iowa, Kentucky, Wisconsin, Oklahoma, and, of course lots from Colorado and adjoining states. I originally thought of Colorado as my main field, but, as I've indicated, "You can't keep good seeds down," and far be it from me to discourage anyone, anywhere, from starting right by planting **LONG'S** Tried and True seeds, best in the Long run.

Greeley Wonder "Endurance Test"

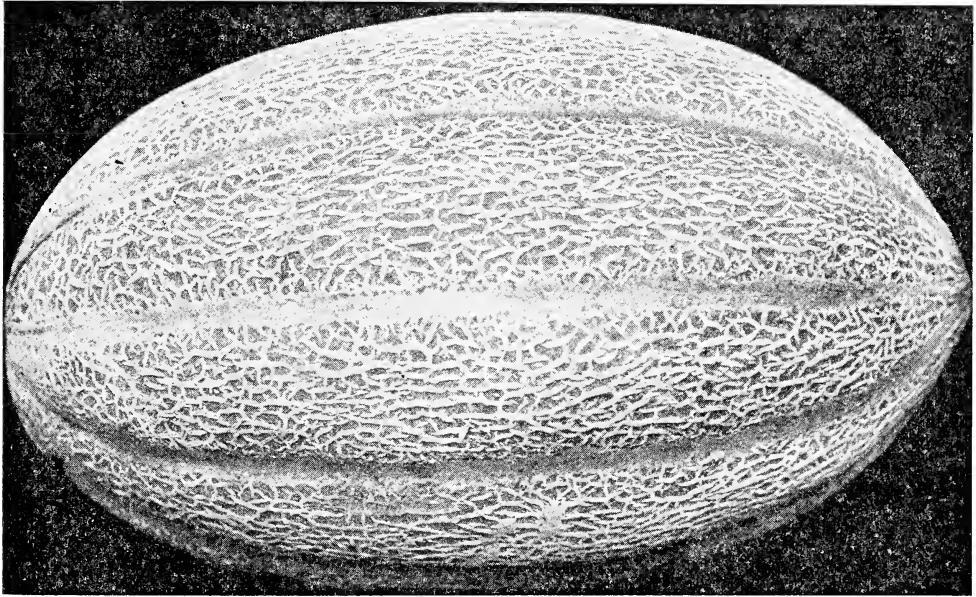
Perhaps I've been too conservative in telling of the keeping qualities of Greeley Wonder melon. That it does stand some hard knocks was proven when I brought a few of these melons from Greeley, three of which were later photographed in Boulder for the illustration I use.

That was several years ago. I drove "Henry" to Greeley, picked up two crates of Greeley Wonders at Hafendorfer's ranch, then hit the trail for Wellington, where I had an invitation to eat supper with my friend, I. T. Earl. Got a late start that afternoon and took a cross-country road, new to me, over very rough landscape. Not a house or speed cop in sight for miles, so I told Henry to go to it, for I didn't want to miss that supper! The way those melons and I bounced and jounced about was something fierce, yet the melons kept several days after arriving in Boulder.

Hey! You Men from Iowa!

Shake! I'm from Iowa myself. Say, do you remember the melons we used to grow back in old I-o-way? Often planted them in the cornfield, you know, so as to hide the patch. Well, along in the fall we would go out to a given point, look cautiously around, and if the coast was clear, count so many rows east, then follow a row so far south until we came to a "clearing" in that forest of earful corn. And, Oh, Boy! Didn't those melons taste "dee-licious"?

I suppose we really have better varieties now, but somehow none taste quite like they did some 30 or 40 years ago. But in selecting from many varieties my list of water melons and musk melons, I have tried to round up the ones that "take you back home" and taste as sweet and luscious as we still think those melons tasted. "Have another slice. We'll cut this one also."



The Andrus Musk Melon (New) Made In Colorado!

Last year I told you about a melon that Bert Andrus and his brother Jim have been growing near Boulder here for several years. It's a fine big melon and surprisingly early for a large musk melon. We were not sure of its name so I called it the "Nameless Melon," but said it might be the Bay View, as seemed to have the size and shape of a melon by that name. Last summer several old-time melon growers pronounced it the real Bay View, so I have listed it under that name on the opposite page.

As I told you last year, this melon is a good one to go with Greeley Wonder, because it ripens about the same time but keeps longer after being picked. Thus a market gardener can sell both Greeley Wonder and this Bay View to a customer at the same time, suggesting that the Greeley Wonder be used first, the Bay View last, thus avoiding a melon famine until his next trip.

Styles in melons change, as in other things. Most people now prefer a salmon flesh musk melon. Bay View is green flesh. So to be in style Bert Andrus crossed the Bay View with Greeley Wonder several years ago, and has finally gotten a melon of the same large size, long shape, and earliness as Bay View but with salmon flesh, and better flavor than the Bay View.

I might have offered this as the "Long" melon, for it is "long," but believe we should give the credit to Andrus, so will call it the "Andrus Melon." Have only a small supply this seed. Pkt., 10c; oz., 20c; ¼ lb., 60c; lb., \$1.60.

100 Pansy Plants, \$2.00

See Page 34

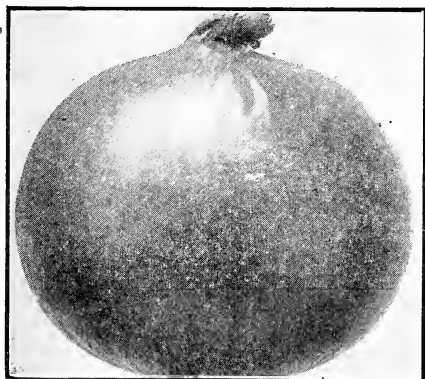
LONG'S High-Grade Tested Onion Seed



LONG'S Mountain Danvers

Special Improved Strain

V103. Over on the Western Slope, way up over 6,000 feet, there was a man with an idea 25 years ago. This man believed he could develop an Onion that would yield well and mature perfectly in his section, where onion growing had been given up on account of the short season. This man made good. By selecting and re-selecting he finally "built" Mountain Danvers.



For years Mountain Danvers onion made a great record as a flat to medium globe, but not uniform in color or type. Then my friend, A. L. Franklin, took it in hand and by years of selection brought it up to an ideal globe of unvarying golden yellow color. The bulbs are as sound as baseballs and almost as perfect in shape. Necks thin; few or no scullions.

LONG'S Improved Mt. Danvers is extra early, often being ready for market before main crop varieties come on, when it brings much higher prices. It is also one of the best main crop kinds, keeping and shipping especially well.

LONG'S Improved Mt. Danvers insures a crop in many localities where season is short and where ordinary kinds would not make good. Yet it is also meeting with much favor in lower altitudes. In some localities it does not attain as large size as the South-ports and other globes, while in others it has been grown to weigh a pound, record yields of 600 sacks to the acre being made under ideal conditions over on the Western Slope where this onion originated. Pkt., 10c; oz., 30c.

Except where noted, all ONION SEED at: Small Pkt., 5c; Large Pkt., 10c. For larger lots, see page 22.

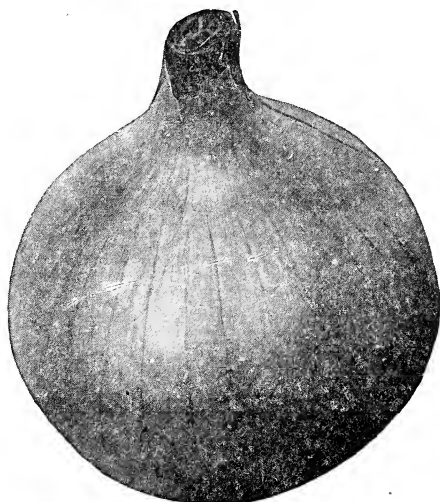
Yellow Globe Danvers

V106. A well-known variety, described by its name, Yellow Globe, being similar to the old Flat Danvers but globe instead of flat. As globe onions are now favored more than flat, I have discontinued the Flat Danvers, and recommend the Globe Danvers instead. The Flat Danvers is used mostly now for growing sets. (But if you want to grow your own sets, try Brown Australian. It is one of the best for sets.) Oz., 25c.

LONG'S Red Wethersfield

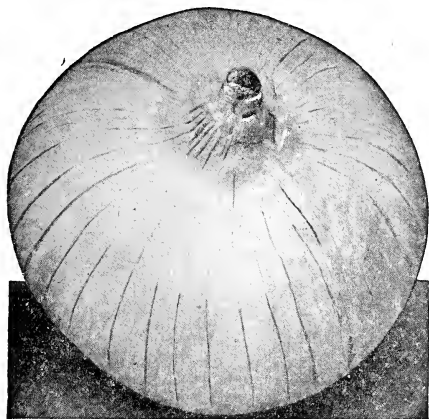
V99. An old red variety of the flat type, very popular in the South and does well in our section, though the Red Globe is now taking first place. Most Red Sets are grown from Red Wethersfield seed. Oz., 25c.

LONG'S Select Prize-Taker



V96. The big yellow variety, acclimated from the popular Spanish Onion. Flesh white, an milder than many other varieties. Oz., 25c

LONG'S White Silverskin



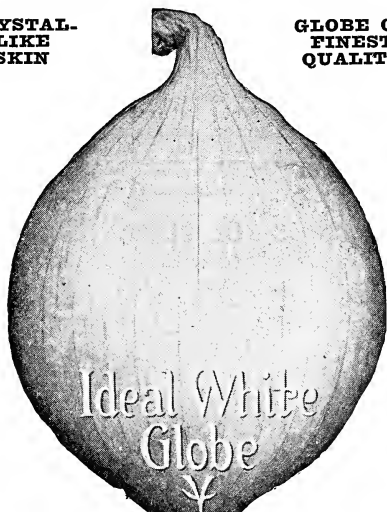
V102. (Also called White Portugal and White Danvers.) Produces good medium size bulbs. Is early, mild and long keeper. The standard for growing White Onion Sets. Also planted largely for bunching and pickling onions. If for pickling the seed should be sown very thick to prevent bulbs becoming too large. Oz., 30c.

For larger lots, see page 22.

LONG'S Ideal White Globe

**CRYSTAL-
LIKE
SKIN**

**GLOBE OF
FINEST
QUALITY**



V97. Just what you may have been looking for in an ideal globe. Pure white, long keeping onion that matures fairly early. Oz., 30c.

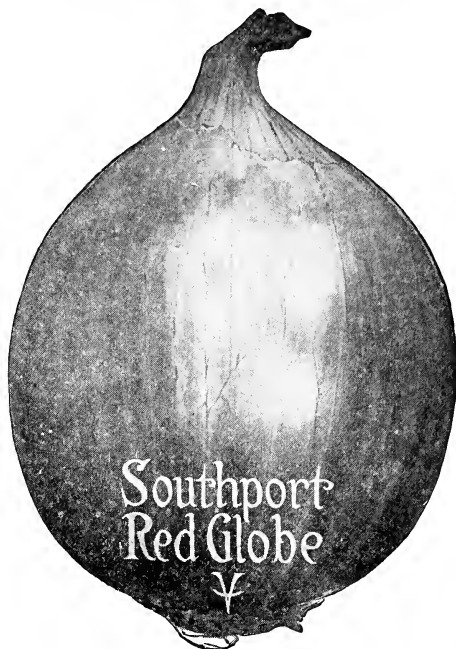
LONG'S Brown Australian

V100. Very solid onion of light brown color; matures early; keeps well. Oz., 20c.

LONG'S Early Barletta

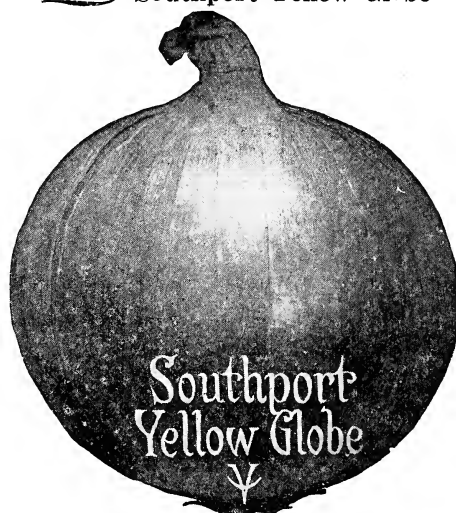
V101. An early white variety used for pickling. Plant very thick. Oz., 30c.

LONG'S Southport Red Globe



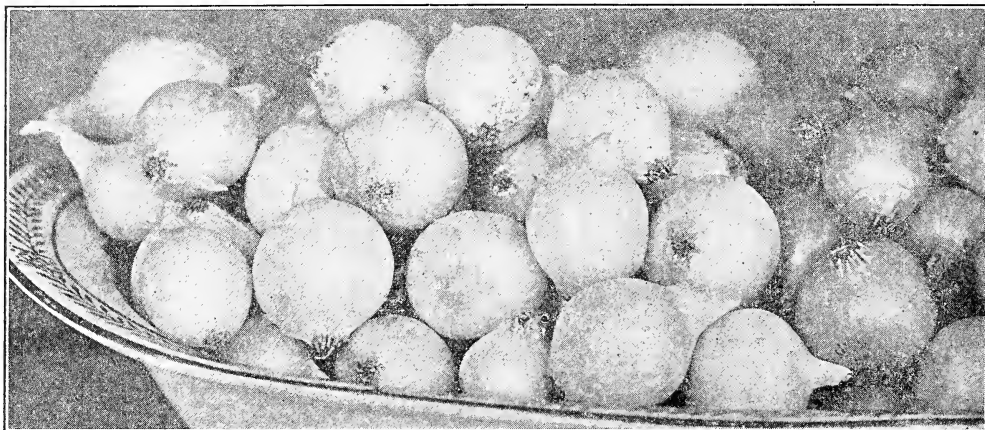
V104. Grown from carefully selected bulbs of the popular market variety, large Red Globe—ideal type, deep rich red color. Splendid for the home garden also. Red Globe is grown extensively in the Greeley onion district, and is the leading money maker for big onion growers in northern Iowa, especially around St. Ansgar, and, in fact, is a standard sort everywhere. Heavy yielder. Oz., 25c.

LONG'S Southport Yellow Globe



V105. A good running mate for my select Southport Red Globe. Highest grade seed, grown only from carefully selected bulbs true to type and color. Oz., 25c.

LONG'S Colorado-Grown "Hand-Polished" Onion Sets



That's no joke. These sets are actually hand-polished as they are rubbed by hand to remove all the dirt, roots, tops and any other trash.

For a succession of fresh Green Table Onions, plant sets at different times, from early March until July.

Large Dry Onions for fall and winter use are easily raised from sets. Costs more than to plant the seed, but returns are quicker, and most of the tedious hand labor of thinning and weeding is obviated. Use the smaller size sets for growing large bulbs. Plant hazel or tiny size, not the larger unless you have to, as the smaller sets are cheaper even at higher price per quart and make better onions.

Prices for Regular Sets

RED or YELLOW.	2nd Zone	3rd Zone	4th Zone	5th Zone
Quart	\$.22...	\$.24...	\$.25...	\$.27
4 Qts.....	.75...	.79...	.97...	1.05
8 Qts.....	1.35...	1.43...	1.59...	1.75
16 Qts.....	2.40...	2.56...	2.88...	3.20
32 Qts.....	4.30...	4.62...	5.26...	5.90
WHITE.				
Quart25...	.26...	.27...	.29
4 Qts.....	.90...	.94...	1.02...	1.10
8 Qts.....	1.55...	1.63...	1.79...	1.95
16 Qts.....	2.80...	2.96...	3.28...	3.60
32 Qts.....	5.25...	5.57...	6.21...	6.85

LONG'S "Tiny" Onion Sets

The smallest of all Onion Sets, about the size of a large garden pea. You don't need to set them, just sow in a row like peas and cover about one inch. They make early green onions a little later than regular sets and much earlier than seed.

LONG'S Tiny Sets are especially valuable for growing regular onions for winter use. Being so small you get all the way from 600 to nearly 1,000 Tiny sets to the quart, and practically every set will make an onion, the crop maturing earlier than onions from seed.

Will have a limited supply of Tiny sets, in Yellow and White. Price for Yellow: Pint, 30c; quart, 50c. Price for White: Pint, 35c; quart, 60c; prepaid.

LONG'S Hazel Size Sets

(In Yellow and White Only.)

Hazels are just like other bottom sets except that they run smaller in size. The smaller size not only gives you about twice as many sets to the quart as you get when buying ordinary size sets, but also gives you a better set, for this reason: A good many sets of the size usually sold, will send up a seed stalk. This does not matter so much if onions are grown for early green onions, but if wanted for mature dry bulbs the seed stalk causes a hard, woody center.

But with Hazel Size Sets you rarely if ever have any trouble with seed stalks. They make the finest green onions and the best of matured bulbs, and the crop is ready for market before onions from seed come in.

Prices for Hazel Sets

(About 300 to the Quart.)

YELLOW.	2nd Zone	3rd Zone	4th Zone	5th Zone
Quart.....	\$.32...	\$.34...	\$.35...	\$.37
4 Qts.....	1.10...	1.14...	1.24...	1.30
8 Qts.....	1.70...	1.78...	1.94...	2.10
16 Qts.....	3.20...	3.36...	3.68...	4.00
32 Qts.....	5.80...	6.12...	6.76...	7.40

WHITE HAZELS.

Quart.....	\$.35...	\$.36...	\$.38...	\$.40
4 Qts.....	1.20...	1.24...	1.32...	1.40
8 Qts.....	1.90...	1.98...	2.14...	2.30
16 Qts.....	3.30...	3.46...	3.78...	4.10
32 Qts.....	6.00...	6.32...	6.96...	7.60

(No Red Hazels. Bags weighed in.)

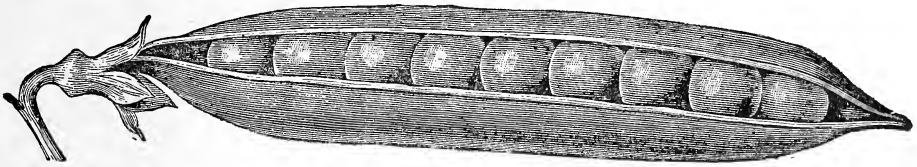
Our sales of Hazel and Tiny sets are increasing greatly from year to year, as our customers learn of their real value.

1,000 Onion Sets for \$1.00

For \$1.00 we will mail you, prepaid, fully 1,000 Hazel sets, white or yellow. You can grow a pile of onions from this dollar lot.

All sets figured at 32 lbs. to bushel (1 lb. to quart).

Popular, Profitable Peas for Particular Planters



LONG'S Large, Long, Luscious Laxtonian. Early, Too.

V406. This big, long podded, variety is ready for use as early as the small American Wonder, and only a little later than Alaska. Pods are long but vines are short. Peas are large, wrinkled, sweet, running 7 to 10 in a pod. Vines require no staking; rows may be planted close, to economize space; peas easily gathered by the handful, and the shelling of a mess is a short job, on account of the size of pods and peas. Our sales of Laxtonian have increased from year to year so that now we sell almost as much of this variety as all the others together. Pkt., 10c; ½ lb., 20c; lb., 35c.

LONG'S Montana-Grown Early Giant Pod "Blue Bantam"

V408. Nothing small or "Bantam" about this pea but the vines, which run 12 to 16 inches according to season, soil, water and cultivation. But the PEAS! Fine big pods, usually well-filled, with large and luscious peas. So like Laxtonian in every way that it's a toss-up as to which is the better. You can't lose if you bet on either one. Pkt., 10c; ½ lb., 20c; lb., 35c.

LONG'S Favorite Dwarf Variety for Second Early

V418. DWARF TELEPHONE. A second early pea with short to medium vine, but pods and peas large like Laxtonian and almost as large as Tall Telephone. One of the best. Pkt., 10c; ½ lb., 20c; lb., 35c.

Eight Other Good Kinds

V410. ALASKA. Early smooth pea, standing early planting, but hard to sell after the larger sorts come in a little later. Pkt., 5c; ½ lb., 13c; lb., 22c.

V412. AMEER, or GIANT ALASKA. Almost as early as Alaska, but much larger and better; is also smooth seeded, and will stand early planting. Pkt., 10c; ½ lb., 15c; lb., 25c.

V422. EDIBLE POD. Dwarf Gray Sugar. Pods as well as peas are cooked, like snap beans. Pkt., 10c; ½ lb., 15c; lb., 25c.

V426. EVERBEARING (Bliss). A later sort that continues bearing for a long time, though most other mid-season kinds do also. Pkt., 10c; ½ lb., 18c; lb., 30c.

V428. GRADUS. Called also Early Telephone. Tall vines, large pods and peas. Does better on some soils than others. Pkt., 10c; ½ lb., 20c; lb., 35c.

V432. LITTLE MARVEL. Early; vine short; pods not large but always packed tight with peas of good quality. Good yielder. Pkt., 10c; ½ lb., 15c; lb., 25c.

V434. STRATAGEM. Good mid-season kind. Pkt., 10c; ½ lb., 15c; lb., 25c.

V436. TALL TELEPHONE. Very tall; pods very large. Pkt., 10c; ½ lb., 18c; lb., 30c.

Culture Suggestions. Peas grow and attain the stage just fine for "green peas" with so little care that they should be planted liberally. The plants store nitrogen in the soil for the crop to follow, and there is plenty of time to grow radishes, turnips, lettuce, beets, etc., after the peas have been used.

Bear this in mind. The smooth varieties, like Alaska and Ameer, may be planted very early, even in February if soil permits. They seldom, if ever, rot in the cold, wet ground. Because of this these kinds are valuable. They deliver the goods early. But the wrinkled kinds—Laxtonian, Blue Bantam, Dwarf Telephone—in fact, all the others in my list, are sweeter and should be planted fairly early. A long spell of cold, wet weather in early spring may cause the seed to rot, but this seldom happens. Your largest plantings should be of these wrinkled, sweeter kinds.

Peas thrive best in the cooler early months of the season, and do not do very well from late plantings. Beans like hot weather but peas prefer it cooler. So plant liberally early in spring. Dwarf Telephone is later than Laxtonian and Blue Bantam, but it is best to plant it a few days to a week or so later than these, lest it come into bearing too soon to make an ideal succession.

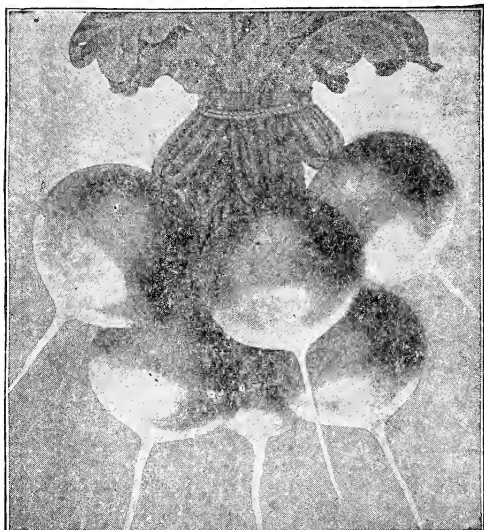
Peas do not need a great deal of water, if well cultivated from time they come up, until in bloom. Running the water along close to the rows is better than to use the hose. Too much sprinkling may cause mildew.

Sow rather thick, using a pound to about 125 feet of row, though thinner may be best if shy on moisture.

All PEAS prepaid at these prices.

For larger lots, see page 22.

LONG'S Crisp Radishes for Home and Market



Culture. Radishes must grow quickly to be tender. Sow a few early—just take a chance on them—and then sow every few weeks all spring and summer, to have fresh, crisp radishes whenever wanted.

For larger lots, see page 22.

V135. EARLY SCARLET TURNIP, WHITE TIP. Quick growing variety, very attractive for bunching account rich red color, except bottom, which is white, as illustrated above. Small Pkt., 5c; Large Pkt., 10c; oz., 15c.

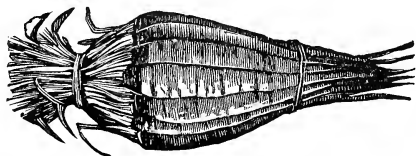
V137. GLASS, or CINCINNATI MARKET. Corresponds to Icicle, but color is red. The best long red. Pkt., 5c; oz., 10c.

V138. FRENCH BREAKFAST. An old favorite of the half long type. Color red, shading to white at base. Soon gets pithy and should be sown often to provide supply crisp radishes. Pkt., 5c; oz., 10c.

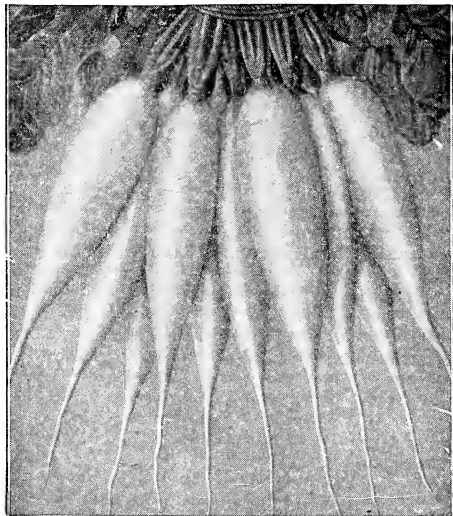
V140. WHITE STRASBURG. Similar to Icicle but larger and later. Pkt., 5c; oz., 10c.

V141. CRIMSON GIANT. Here's a hummer! Round, bright red, growing quickly to bunching size, but will keep right on growing to large size without losing its crispness. I plant Crimson Giant and Icicle from early spring until September and we have fresh, crisp radishes all summer and until late in fall. Select seed. Small Pkt., 5c; Large Pkt., 10c; oz., 15c.

LONG'S Vegetable Oyster



V176. Good substitute for oysters. Sow where may remain until late in fall, or may be left in ground and dug as needed in winter. Pkt., 5c; Special Pkt., 10c; oz., 25c; ¼ lb., 75c.



V136. WHITE ICICLE. Not in a thousand years could you think of a better name for this popular radish. The name just fits. Is one of the earliest long radishes, good for sowing every few weeks from early spring until September. My stock of this is very fine. Small Pkt., 5c; Large Pkt., 10c; oz., 15c.

V142. CHINESE ROSE (Winter). Pink, oval or half long. Pkt., 5c; oz., 10c.

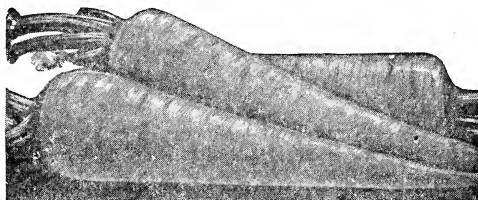
V143. WHITE CHINESE (Winter). Very large, mild and juicy. Extra fine. Pkt., 5c; oz., 15c.

V144. BLACK SPANISH (Winter). Long, almost black. Pkt., 5c; oz., 10c.

V139. MIXED RADISH. Good mixture of all sorts but Winter. Pkt., 5c; oz., 10c.

For larger lots, see page 22.

LONG'S Parsnips



Culture. Sow early in deep mellow soil, pressing soil after planting. Good parsnip seed scarce this year.

V126. HOLLOW CROWN. Small Pkt., 5c; Large Pkt., 10c; oz., 15c.

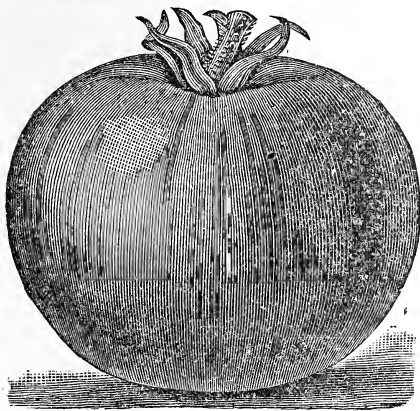
LONG'S Pumpkins

For Larger Lots see page 22.

V132. SMALL SUGAR. The good old yellow pie pumpkin. Pkt., 5c; oz., 15c.

V133. LARGE FIELD. Pkt., 5c; oz., 10c.

V134. KING OF MAMMOTHS. Largest of all pumpkins, yet good for pies as well as for stock. Pkt., 10c; oz., 15c. a big, almost round, melon, as shown above.

LONG'S Select Tomatoes

Culture: Sow the seed in boxes in the house or in hot bed 6 to 8 weeks before time to set out. Failure to germinate seed is often due to lack of heat. **Tomato seed must be kept warm** to start it. (Same with pepper seed.) If come up thick, thin them at once. "Damping off" is a common trouble and is due to plants being too thick, watered too much, and lacking enough fresh air. When plants have 4 leaves transplant to shallow boxes or cold frames. Gradually harden them off by exposing to outdoor air to get stalky, sturdy plants.

Set plants 3 to 4 feet apart in the garden, water moderately; cultivate well.

Except where noted, all **TOMATO SEED** at 5c for small pkt.; Long's special pkt., 10c.

V154. EARLIANA. Is somewhat small, but earliest of all. Select seed. $\frac{1}{2}$ oz., 25c; oz., 40c; $\frac{1}{4}$ lb., \$1; lb., \$3.50.

V159. NEW BURBANK. Another good, early tomato. Pkt., 10c; $\frac{1}{2}$ oz., 40c; oz., 75c.

V155. BONNY BEST. Bright scarlet. Few days later than Earliana, but larger and smoother. Good for early, medium and late. $\frac{1}{2}$ oz., 25c; oz., 40c; $\frac{1}{4}$ lb., \$1; lb., \$3.50.

V156. CHALK'S EARLY JEWELL. Deeper red than Earliana, larger and better for main crop as well as good for early. $\frac{1}{2}$ oz., 25c; oz., 40c; $\frac{1}{4}$ lb., \$1; lb., \$3.50.

V157. LIVINGSTON'S BEAUTY. Medium early, smooth, prolific, purplish red. Standard main crop variety. $\frac{1}{2}$ oz., 25c; oz., 40c; $\frac{1}{4}$ lb., \$1; lb., \$3.50.

V162. PONDEROSA. Largest of all tomatoes, sometimes rough, few seeds. Pkt., 10c; $\frac{1}{2}$ oz., 25c; oz., 45c; $\frac{1}{4}$ lb., \$1.20.

V163. NEW JOHN BAER. Similar to Chalk's Jewell, yet better, for medium early or main crop. Highly recommended by our Agricultural College and County Agent, after several years' trial. Pkt., 10c; $\frac{1}{2}$ oz., 25c; oz., 40c; $\frac{1}{4}$ lb., \$1; lb., \$3.50.

V164. YELLOW PEAR. Small pear-shaped tomato for preserving. $\frac{1}{2}$ oz., 25c; oz., 45c; $\frac{1}{4}$ lb., \$1; lb., \$3.50.

V165. GROUND CHERRY. Also called Strawberry, or Husk Tomato. Each fruit in husk. Sweet and fine for preserving or pies. $\frac{1}{2}$ oz., 30c; oz., 50c.

LONG'S Early Red Head

V160. Red Head is a "Red that is Red," real early tomato of medium size, almost round, solid and smooth and of good flavor. Sets heavy, and keeps right on bearing during the whole season. As I've often remarked, some vines are so loaded that it looks like a bucket of tomatoes had been poured around the plant. Red Head is a dandy and a money-maker. Pkt., 10c; $\frac{1}{2}$ oz., 50c; oz., 90c; $\frac{1}{4}$ lb., \$2.50.

"I have grown your Red Head tomato for three seasons and think it is the only tomato for the west."—Chas. Roche, Colorado Springs, Colo.

"You have not told the truth about your pansy seeds. I bought a package said to contain 200 seeds and planted them carefully. I now have 216 plants, and more coming. I thank you."—Mrs. E. Brandon, Westcliffe, Colo.

LONG'S Peppers—Full of Life and "Pep"

Culture. Peppers hard to germinate. Do not blame yourself, your hotbed or the seed if you fail to make them come through. Start them indoors or in hotbed. Soil must be very warm. Transplant after frost.

V127. RUBY KING. Standard sort large sweet pepper. Pkt., 5c; $\frac{1}{2}$ oz., 25c; oz., 45c.

V128. CHINESE GIANT. Larger than Ruby King; mild. Pkt., 10c; $\frac{1}{2}$ oz., 35c; oz., 65c.

V129. LONG RED CAYENNE. Pkt., 5c; $\frac{1}{4}$ oz., 20c; oz., 40c. "Full of pep."

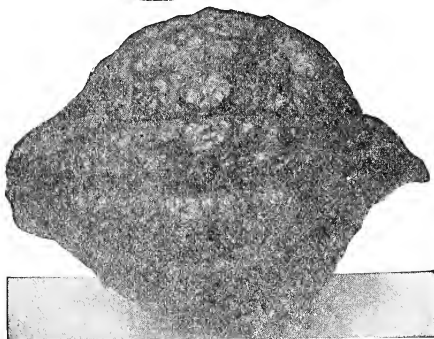
V129½. RED CHILL. Small, red, very hot. Pkt., 10c; $\frac{1}{2}$ oz., 25c; oz., 45c.

V130. PERFECTION PIMENTO. Sweetest and mildest of all peppers. Flesh very thick. Pkt., 10c; $\frac{1}{2}$ oz., 30c; oz., 60c.

V131. NEAPOLITAN. Earliest of all red mild peppers; fruit grow upright. Pkt., 5c; $\frac{1}{4}$ oz., 20c; oz., 40c.

V131½. NEW ROYAL KING. Similar to Ruby King but larger and flesh much thicker. Superior to Ruby King. Pkt., 10c; $\frac{1}{2}$ oz., 30c; oz., 50c.

No Pepper Plants by Mail

LONG'S Squash

All SQUASH: Pkt., 5c; Special Pkt., 10c.

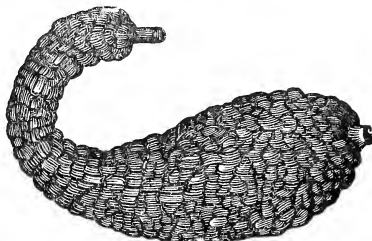
V149. TRUE HUBBARD. The good old green, solid, hard shell, long keeping, fine flavored kind that melts in your mouth. **LONG'S**

Special stock. Oz., 15c.

V150. SWEET POTATO. (Pike's Peak or Sibley.) Large oval squash, tapering at blossom end. Skin olive-green. When baked, resembles sweet potatoes. Oz., 15c.

V151. DELICIOUS. Varies in form and color, but always good. Oz., 15c; ¼ lb., 30c; lb., \$1.

V152. WHITE BUSH SCALLOPED. For summer use. Oz., 15c; ¼ lb., 30c; lb., \$1.00.



V153. GIANT CROOKNECKED. Best of summer squashes. Oz., 15c; ¼ lb., 30c; lb., \$1.

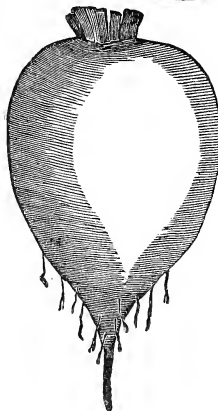
V154. BANANA. At last, here's your Banana squash. Have tried for three years to get enough of this seed to list in catalogue, but failed, for one cause or another. Think I have about enough now to go around this season. As name implies, this is a long squash. When baked, the thick golden meat is indeed delicious. Pkt., 10c; oz., 20c; ¼ lb., 60c; lb., \$2.00.

LONG'S Spinach

V145. BLOOMSDALE, SAVOY LEAVED. One of the best early varieties. Pkt., 5c; oz., 10c.

V146. MONSTROUS-LEAVED VIROFLAY. Vigorous growing early kind with large, thick dark green leaves. Pkt., 5c; oz., 10c.

V148. BOULDER "TREE" SPINACH. Seed so light that a little goes a long ways. May be cut as other spinach, but if allowed to

LONG'S Turnips

Culture. Turnips do best in rich, loose soil, but thrive under less favorable conditions. May be sown from early spring until August. For main crop for winter use, sow in July.

V169. Early Snowball. Small, pure white, round, extra early; very tender and sweet. Ideal early table turnip.

V170. EXTRA EARLY PURPLE TOP MILAN. The earliest of all turnips. Medium size. Somewhat flat.

All at: Pkt., 5c; Large Pkt., 10c; Oz., 15c.

V171. EXTRA EARLY WHITE MILAN. Similar to V170, but pure white.

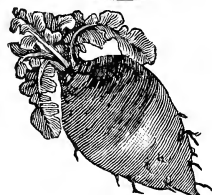
V172. PURPLE TOP STRAP LEAVED. Good for early or main late crop. Grows to large size.

V173. WHITE EGG. Quick growing, egg shaped, pure white variety, for spring or summer growing. Good size.

V174. PURPLE TOP GLOBE. Similar to White Egg in shape but with purple top. Superior to the old Purple Top Strap, which is flat.

V174½. AMBER GLOBE. Another good globe about same shape as White Egg, but color nearly yellow. Seems to do especially well in the mountains.

For larger lots see page 22.

LONG'S Best Rutabaga

V175. AM. PURPLE TOP. Color purple above and yellow under the ground. Flesh yellow and solid; few leaves and small neck. Pkt., 5c; large pkt., 10c; oz., 15c.

grow it will attain a height of 6 feet. You can pick the leaves off at any stage of growth and will find them mild and tender. Pkt., 5c; oz., 20c; ¼ lb., 50c.

V148½. NEW ZEALAND SPINACH. Here's your hot weather spinach. Don't need to worry about its running to seed. Leaves very fleshy, and brittle when cooked. Each plant makes a bush several feet in diameter. Seeds large and hard. Should be soaked 24 hours before planting. Should not be planted until ground is warm. Thin to 20 inches or so apart in good ground. Pkt., 10c; oz., 15c; ¼ lb., 50c; lb., \$1.25.

LONG'S Leeks

788. BROAD LONDON, or LARGE AMERICAN FLAG. This is a strong-growing variety, producing large thick stems of sweet flavor when properly blanched. Pkt., 5c; oz., 25c; ¼ lb., 75c; lb., \$2.25.

LONG'S Kohl-Rabi

Culture. Sow in rows outdoors about May 1st. Thin to 8 inches. Cultivate like cabbage.

Kohl-Rabi is grown for its turnip-shaped bulb, which is formed above the ground. The bulb should be used while young and tender. Set plants 8 in. apart.

786. EARLY WHITE VIENNA. The best for table use. Pkt., 5c; oz., 20c.

LONG'S Herbs—All 10c Pkt.

*Caraway	*Fennel
*Catnip	*Lavender
*Coriander	*Marjoram
*Dill—Oz., 15c	*Rosemary
*Sage—½ Oz., 30c	Savory

Endive

One of the best and most wholesome salads for fall and early winter use. Also used in soups. Sow in June or July in rich ground. Thin or transplant to 6 or 8 inches apart. A few weeks before wanted for the table, tie up the bunches to blanch. Or, may be blanched by throwing brush or some such covering over the plants.

WHITE CURLED. The variety most used. Pkt., 5c; oz., 15c; ¼ lb., 35c.

BROAD LEAVED. Plain, broad leaves. Pkt., 5c; oz., 15c; ¼ lb., 35c.

Rhubarb, or Pie Plant

You can "grow your own pies" by starting the plants from seed, or getting the roots, the latter method gaining time. Sow the seed in spring, and transplant where wanted the following spring. Pkt., 5c; oz., 20c.

RHUBARB ROOTS. Good live roots that will take hold and make good. Each, 20c; 3 for 50c; 7 for \$1.00; prepaid.

Kale, or Borecole

Used for greens. Pkt., 5c; oz., 15c.

Okra, or Gumbo

The green pods are used in soups, to which they impart a rich flavor. Sow in open garden but not until ground is warm. Thin to 10 inches. Pkt., 5c; oz., 15c; ¼ lb., 40c.

Mammoth Sunflower

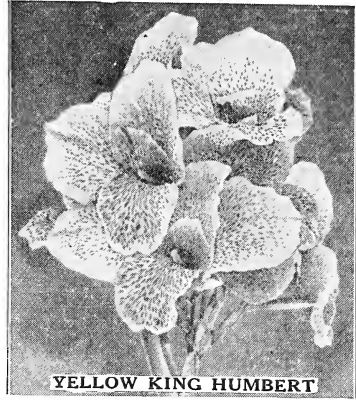
The well-known Giant Russian Sunflower that makes such a tremendous growth and bears a lot of good seed; good for poultry food. The whole plants are now used a great deal for silage. Pkt., 5c; lb., 20c; prepaid. 5 lbs. at 16c; 10 lbs. at 15c; prepaid.

Scarlet Runner Bean

Very rapid climber. One customer says it must have been Scarlet Runner bean which grew so fast and enabled Jack the Giant Killer to make his get-away. Blossoms bright red. Beans good to eat, as snap beans. Pkt., 10c; ½ lb., 25c; lb., 40c.

Minnesota No. 13 Seed Corn

We do not handle this, or any other field seeds. Write to J. A. Gilfillan, Rt. 3, Fort Lupton, Colo., for prices on his dry land grown Minn. No. 13 seed corn.

LONG'S Orchid-Flowered Canna Roots**YELLOW KING HUMBERT**

Handsome bedding plants, both foliage and flower of pleasing appearance. **They bloom and bloom and bloom.** The varieties I list are greatly improved kinds that will surprise and delight you. Heights given are approximate.

Class A. King Humbert. Bronze foliage; scarlet flowers of immense size; 5 feet.

Class B. Yellow King Humbert. Green foliage; very large blossoms of deep, rich yellow, softly spotted with red; 4 feet.

Class C. The President. Glossy green foliage; flowers vivid red. Very showy. 4 ft.

Class D. Loveliness. Green foliage; soft pink blossoms. 4 feet.

Class E. Eureka. Extra fine white. Combines well with any other color. 4 ft.

Any of the above Giant Orchid-Flowering Cannas, your selection, alike or assorted, each labeled, 3 for 50c, 7 for \$1.00, prepaid.

MIXED GIANT CANNAS. The above kinds or others as good, our selection, none labeled, 4 for 50c, 9 for \$1.00, prepaid.

Two Fire Red Cannas

King Humbert. Not new, but holds its place among the favorite giant reds, with bronze foliage. Blossoms very large.

The President. One of the newer cannas that is really wonderful. Gigantic blossoms of the "reddest red" imaginable. Still brighter than King Humbert. Foliage green. Plants not quite so tall as King Humbert. The two make a striking and dazzling display. A row of each down through my garden created a real sensation last summer. The President sold as high as 50c a root last spring.

Price for Large Roots. I want you to try these two wonderful red cannas, and am going to offer you specially selected roots at a little higher price than quoted above under Class A and Class C. These larger roots of King Humbert and The President will cost 30c each; 2 for 50c; 5 for \$1.00. If order at this price specify large roots. They are not clumps, but stronger divisions than usually sold.

Cannas do not need to be set any certain distance apart, so you can use more or less in filling a bed or row. Try these combinations: King Humbert for center; next, Yellow King Humbert; outside row, The President. Or, same, with Eureka in place of Yellow King Humbert.

Canna Culture, see page 59.

LONG'S Special Stock Giant Pascal Celery Seed

For 12 years, a Boulder celery grower has been selecting and re-selecting his strain of Giant Pascal celery seed, to get it as uniform as possible in growth and freedom from strings and pithy stalks. Last season he saved a little more of this fine seed than he needs for his own use. I bought it, at a big price, and offer in small lots at 25c pkt.; ½ oz., 60c; oz., \$1.00.

LONG'S Larger Lots at Lower Prices

Everything except peas, beans and sweet corn is priced prepaid, parcel post. Bags and envelopes weighed in, beyond 4th zone. In ordering peas, beans and sweet corn, add for each pound: 1c for 2nd zone; 2c for 3rd; 4c for 4th; 6c for 5th; 8c for 6th; 10c for 7th; 12c for 8th. I will pay whatever additional postage may be required above these amounts.

Notice. Prices for 5 lbs., 10 lbs., etc., are per pound, not 5 lbs. for the price intended for one pound. Last year several ordered 5 lbs. Laxtonian peas for 27c, plus postage, that is, they allowed only 27c for the whole 5 pounds.

BEANS: (Postage extra. See above.)

Brittle Wax and Fordhook Lima: 5 lbs. at 27c; 10 lbs. at 25c; 25 lbs. at 23c, **per pound**, plus postage.

Burpee's Stringless Green Pod, Full Measure and Ky. Wonder: 5 lbs. at 24c; 10 lbs. at 22c; 25 lbs. at 20c, **per pound**, plus postage. See above.

All other Beans: 5 lbs. at 21c; 10 lbs. at 19c, **per pound**, plus postage.

BEETS

Early Wonder: ¼ lb., 40c; lb., \$1.15; 5 lbs. at \$1.00.

All other Beets: ¼ lb., 35c; lb., 95c; 5 lbs. at 90c.

CABBAGE

Copenhagen Market, originator's stock: ¼ lb., \$1.00; lb., \$3.00; 5 lbs. at \$2.80, per lb.

Danish Roundhead, select Danish grown seed: ¼ lb., 85c; lb., \$2.60; 5 lbs. at \$2.50, per pound.

All other Cabbage: ¼ lb., 75c; lb., \$2.00; 5 lbs. at \$1.90, per pound.

CARROT

All Carrots except Nantes: ¼ lb., 35c; lb., \$1.00; 5 lbs. at 90c, per pound.

SWEET CORN: (Postage extra. See above.)

All varieties: 5 lbs. at 20c; 10 lbs. at 19c; 25 lbs. at 17c, **per pound**, plus postage.

POP CORN: (Postage extra.)

Japanese Rice: 5 lbs. at 21c; 10 lbs. at 19c. All others same price as Sweet Corn. Postage extra.

CUCUMBER

All except V67: ¼ lb., 35c; lb., \$1.00; 5 lbs. at 90c.

LETTUCE

Los Angeles: See page 10.

All other Lettuce: ¼ lb., 50c; lb., \$1.40; 5 lbs. at \$1.30.

MUSK MELON

Rocky Ford, Pollock 10-25, Emerald Gem, Burrell's Gem, Banana, Honey Dew,—all these at: ¼ lb., 35c; lb., \$1; 5 lbs. at 90c.

Others as priced on Melon pages.

WATER MELON

All varieties: ¼ lb., 35c; lb., 95c; 5 lbs. at 90c; 10 lbs. at 80c, per pound.

ONION

Brown Australian: ¼ lb., 45c; lb., \$1.25; 5 lbs. at \$1.15; 10 lbs. at \$1.10.

Imp. Mt. Danvers and Southport White Globe: ¼ lb., \$1.00; lb., \$2.90; 5 lbs. at \$2.80; 10 lbs. at \$2.70.

So. Red Globe, So. Yellow Globe and Prize-taker: ¼ lb., 60c; lb., \$1.60; 5 lbs. at \$1.50; 10 lbs. at \$1.40.

White Silverskin and Barletta: ¼ lb., 75c; lb., \$2.25; 5 lbs. at \$2.15; 10 lbs. at \$2.10.

Yellow Globe Danvers and Wethersfield: ¼ lb., 60c; lb., \$1.75; 5 lbs. at \$1.60; 10 lbs. at \$1.50.

PARSNIP

Hollow Crown: ¼ lb., 35c; lb., 95c.

PEAS: (Postage extra. See above.)

Laxtonian, Blue Bantam, Dwarf Telephone, Gradus: 5 lbs. at 28c; 10 lbs. at 26c; 25 lbs. at 24c, **per pound**, plus postage.

Everbearing and Tall Telephone: 5 lbs. at 25c; 10 lbs. at 23c; 25 lbs. at 21c, **per pound**, plus postage.

All other Peas: 5 lbs. at 22c; 10 lbs. at 20c; 25 lbs. at 18c, **per pound**, plus postage.

PUMPKIN

Sugar: ¼ lb., 30c; lb., 75c; 5 lbs. at 65c.

Field: ¼ lb., 25c; lb., 65c; 5 lbs. at 55c.

King of Mam.: ¼ lb., 40c; lb., \$1.20.

RADISH

Crimson Giant, Early Scarlet Turnip, White Tip (Sparkler Strain) and Icicle: ¼ lb., 35c; lb., 90c; 5 lbs. at 80c.

All other kinds: ¼ lb., 30c; lb., 80c.

RUTABAGA

Am. Purple Top: ¼ lb., 35c; lb., 90c; 5 lbs. at 80c.

SPINACH

Bloomdale and Viroflay: ½ lb., 25c; lb., 40c; 5 lbs. at 35c; 10 lbs. at 30c. Others as priced.

SQUASH

Hubbard, Sweet Potato: ¼ lb., 45c; lb., \$1.30; 5 lbs. at \$1.20. Others as priced.

TURNIP

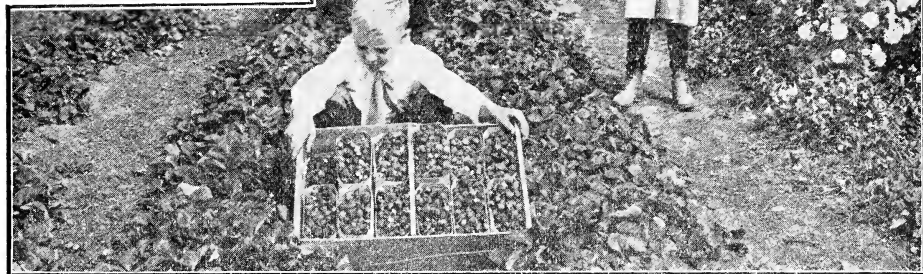
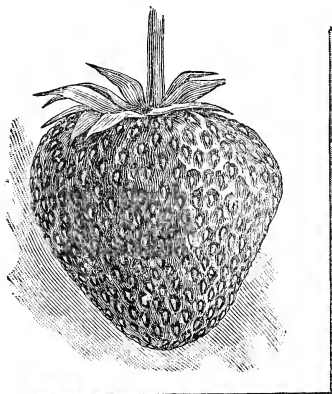
Purple Top Strap and Amber Globe: ¼ lb., 30c; lb., 80c; 5 lbs. at 70c, per pound.

All other Turnips: ¼ lb., 35c; lb., 90c; 5 lbs. at 80c, per pound.

ASPARAGUS ROOTS. Best roots we ever had. 12 for 50c; 36 for \$1.00; 100 for \$2.25; prepaid. Ask for prices on larger lots.

RHUBARB ROOTS. 3 for 50c; 7 for \$1.00; prepaid.

"Have tried your seeds in this climate and compared with those from nearly all leading seed houses and will have to hand it to you."
—Joe Dawson, Nashville, Tenn.

LONG'S Genuine Everbearing Strawberry Plants

This Picture Taken In My Garden Several Years Ago

In some localities and under certain conditions, the old June bearing strawberries are still desirable and profitable. But so many of my customers have found the Everbearing kinds so much more dependable and satisfactory that I handle Everbearing plants only.

Several big things are in favor of the Everbearing. One is that you don't need to worry about losing your spring crop from frosts. If the first blossoms freeze, others come on soon and you simply begin picking a little later. Also, you get a dandy crop of berries the very first season, instead of waiting until the second year—and then may be losing the crop from frosts. Added to this is the fact that you have a continuous crop all summer until late in the fall. Sounds too good to be true.

Progressive Everbearing

The Progressive variety is exceedingly rugged and productive, adapting itself to varied conditions. The foliage is strong and healthy and tall enough to cover most the blossoms, protecting them from frosts. The stems are stout and numerous, bearing large clusters of berries. The berries are large and of excellent flavor.

Plant Early! Many make a mistake by ordering late. These plants are outdoors all winter and stand early planting, and do best if planted early. April is the best month in most sections. In normal seasons early April is best, and even the last of March is none too early some seasons. Time of planting varies, of course, according to your altitude and other local conditions. I stop shipping plants about May 10th. Order a while in advance. Give us time. I do not promise to ship orders any certain day, or "by return

mail."

I guarantee to deliver all strawberry plants within 5th zone, in good live condition for setting out. Shipments beyond 5th zone will be made at your own risk.

Prices: 40 plants (smallest quantity we pack), \$1.00; 100 for \$2.10; 200 for \$4.00; 300 for \$5.50; 500 for \$8.50; 1,000 for \$15.50; prepaid within 5th zone. Safe delivery guaranteed.

Pride of Denver

While this is comparatively new to the general public, yet it has been thoroughly tested and demonstrated on the Denver markets for some years now.

Pride of Denver was originated by a strawberry grower, Mr. Huber, near Denver, and has made a big reputation for itself and its originator.

The plants are most remarkably vigorous and rugged in growth. They are strong and healthy, and when set out, start off quickly, soon setting new plants from runners and forming a heavy row, unless kept pruned back.

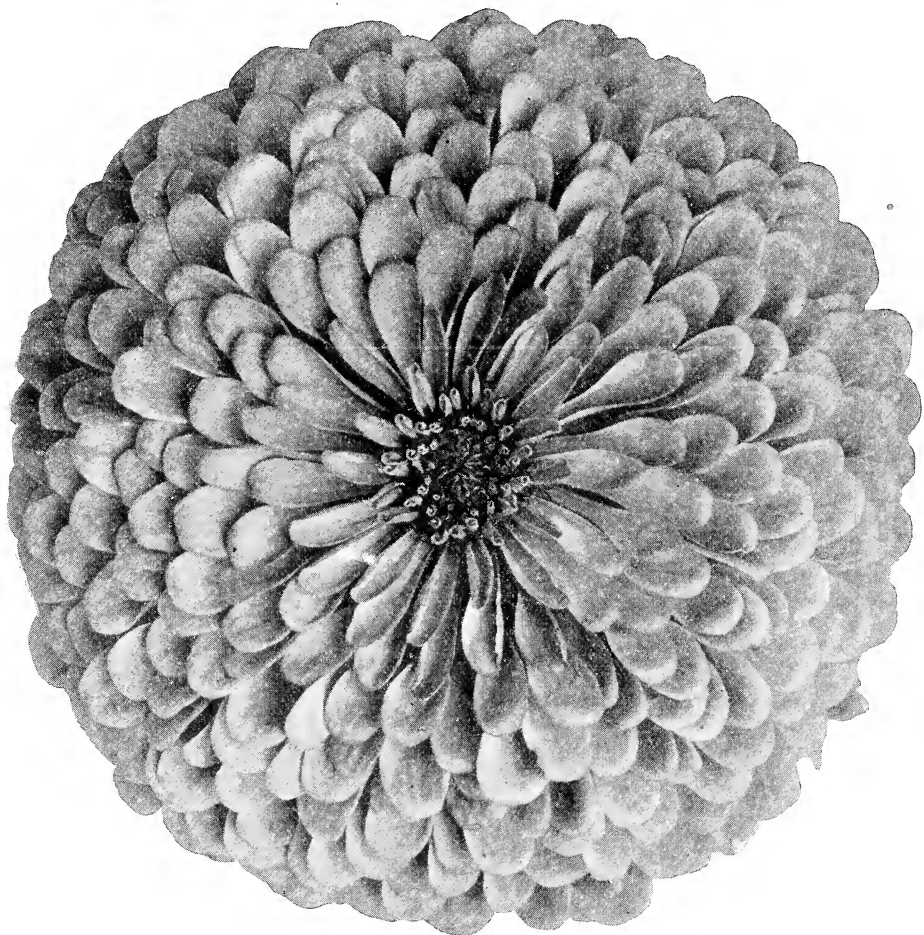
The berries correspond to the large, vigorous plants, and are big and fine in appearance, and of excellent flavor, bringing top prices on the market.

Price last year was \$4.00 per 100, but I grew a good big lot of these plants last season and am going to reduce the price. 24 plants (smallest quantity packed), \$1.00; 100 for \$3.00; 200 for \$5.75; 300 for \$8.00; prepaid within 5th zone.

6 Pride of Denver Plants Free

With every 100 plants you order of either Progressive or Pride of Denver, I will include, free, 6 good plants of Pride of Denver.

LONG'S Zinnias—Largest In the World!



These zinnias are the largest that have been originated up to this time. They come from a famous zinnia specialist in California.

There is no sharp distinction between the two types, the Colossal and the Dahlia-Flowered, but the latter is an improvement on the wonderful Colossal in that the flowers average larger in diameter and are much deeper, having many more petals.

LONG'S Colossal Zinnias

- | | |
|----------------------------|---------------------------|
| Z1. Snow White. | Z6. Golden Yellow. |
| Z2. Apricot-Yellow. | Z7. Rich Orange. |
| Z3. Pink. | Z8. Purple. |
| Z4. Deep Primrose. | Z9. Salmon. |
| Z5. Crimson. | Z10. Scarlet. |

Z11. Long's Special Mixture Colossal Zinnias. Any color or mixed (Colossal) at: Pkt., 10c; $\frac{1}{4}$ oz., 35c; oz., \$1.20.

LONG'S Dahlia Flowered Zinnias

In separate colors and mixed.

Z13. EXQUISITE. Light rose, with center a deep rose. Pkt., 25c.

Z14. GOLDEN STATE. Rich orange-yellow. Pkt., 25c.

Z15. CRIMSON MONARCH. By far the largest and best of the red shades. Pkt., 25c.

Z16. DREAM. Deep lavender. Pkt., 25c.

Z18. BUTTERCUP. Immense deep yellow. Pkt., 25c.

Z19. POLAR BEAR. White. Very large. Pkt., 25c.

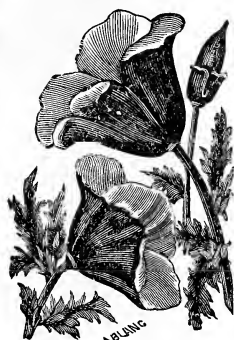
SPECIAL: Five 25c pkts. for \$1.00.

(Separate colors sold in pkts. only.)

Z12. MASTODON MIXED. My finest mixture of largest Dahlia-Flowered zinnias. Many rare colors. **Flowers immense.** Pkt., 15c; $\frac{1}{4}$ oz., 70c.

(For additional information regarding these wonderful zinnias, see page 45.)

Some Extra Good Roots, Plants and Seeds for 1924

FINE NEW
CALIFORNIA
POPPY

"Copper Bowl"

FO35. The rarest and richest color you can imagine in this shade of the popular California poppy. The name describes it. Pkt., 15c.

Double Bachelor Button

Far superior to the common single strain. Fine for cutting. Splendid colors. Will please you.

FO1½ White. **FO1** Blue. **FO2** Rose. **FO3** Mixed. Any color or mixed: Pkt., 10c; ¼ oz., 45c.

Chinese Wool Flower

Attracted much attention and enthusiastic comment in my garden last summer. The flowers resemble a ball of wool. Plants branch freely and are covered with blooms. Very striking for garden display. **Can be dried for winter bouquets.** Sow in garden about May 1st, or start indoors.

FO26 Crimson. **FO27** Rose-Pink. **FO28** Yellow. **FO29** White. **FO30** Mixed. Price any color or mixed: Pkt., 10c.

Geraniums from Seed

Our sales of geranium seed increase from year to year. The 15c packet (see page 29) is splendid, but Grand Zonale is still better. Geraniums are easily grown from seed. Sow in the garden or start indoors. Take up and pot the plants in fall.

FO33. Grand Zonale. Grown by Mrs. Shepherd and probably the finest geranium seed ever offered. Mixed colors—scarlet, crimson, rose, pink, salmon, bluish, white, variegated. Pkt., 25c.

Sea Lavender (Statice)

FO17. A companion for the better known and popular Gypsophila Paniculata (Baby's Breath). The latter is snow white, but Statice is blue. Doubtless you have seen this in florists' gardens. Like Gypsophila, it is used for combining with other flowers to give them a light, airy effect. May be dried for winter, also. Blooms second year from seed. Pkt., 10c.

Note: Before sowing statice seed, rub it hard in the hand to remove husk. Will germinate better.

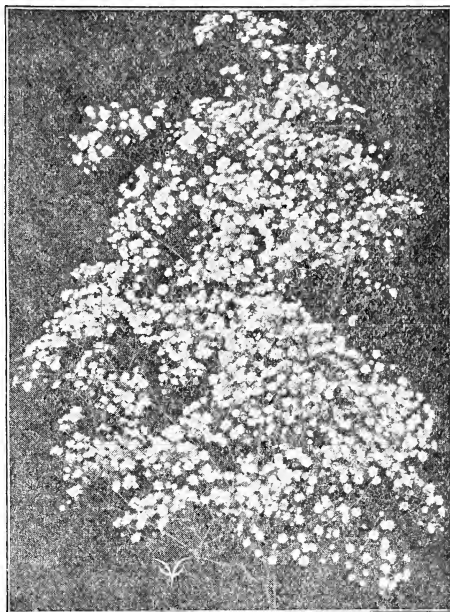
Sweet William Plants

Single and double mixed. From finest seed I could obtain in America and Europe. Will please you. 5 for 50c; 12 for \$1.00; prepaid.

Canterbury Bell Plants

Wintered out in the open garden. All colors, single and double, mixed. The favorite "cup and saucer" type. 5 for 50c; 12 for \$1.00; prepaid.

Note: Some of these plants may not bloom this season, but if not, then will live over and make extra large blooming plants for next year.



New Double Gypsophila

FO49. The single white perennial Gypsophila (Baby's Breath) described on page 29, is indeed dainty, charming and valuable for combining with other flowers. It will always have a place or use of its own.

But a double form of Gypsophila is now obtainable, and is taking flower lovers by storm. It is white and also perennial. Once established the plants increase in size for several years. It blooms the second year from seed (sometimes a little the first year).

Not all come double, however. The double form has not yet become fixed. It is safe to say that one-fourth the plants from this seed will produce double flowers—maybe 50 per cent. But the remaining plants produce dainty single blossoms. If you desire all double flowering plants you can pull out the singles the second year, or mark the double ones and transplant them in another location by themselves. They transplant easily. This double seed is much more expensive than the single. Sold in packets only. Pkt., 25c; 5 pkts., \$1.00.

Double Gypsophila Roots

I have these in two sizes—one-year-old and two-year-old roots. To be reasonably sure of getting at least one double flowering plant you should order half a dozen or more roots. You may get no doubles in just 3 or 4 plants.

Small roots, but will bloom some, 3 for 50c; 8 for \$1.00; prepaid.

Large roots, second year from seed. Were transplanted last spring. Should bloom profusely. 4 for \$1.00; 7 for \$1.50; 11 for \$2.00; prepaid.

Single Gypsophila Roots

The perennial white, described on page 29. Large, two-year-old roots, that will bloom splendidly this season. 3 for 50c; 7 for \$1.00; prepaid.

LONG'S Superb Giants of California Petunias

Petunia, Giants of California

Giant is right. Unless you have seen these monsters they will be a revelation to you when bloom in your garden next summer. The blossom shown here was picked from my garden. There were hundreds more, fully as large and charming. Not all come so large, but all are good size and beautiful.

Culture

Use mellow soil, add one-third fine sand if to be had, sift all through fine screen. Fill pot or box to within 2 inches of top. Water to give good soaking. After soil evenly wet, sow seed thinly and evenly over surface. Some use damp pin point to place seeds firmly in soil but not covered.

Do not cover the seed, unless with least bit of fine sand. Cover pot or box with pane of glass.

If in sun, place one sheet paper over glass in daytime only. Keep soil just damp, but avoid excessive moisture. Remove glass soon as seed germinates. Transplant to other boxes, inch apart, to produce strong plants, or the seedlings may be set in garden if grown slowly and not too thick. Too much moisture and heat may cause the tiny plants to damp off.

Once started, these giant petunias do well in most any garden soil and location. Rich ground and good culture, with plenty water, will of course produce the largest blooms, even larger than this picture.

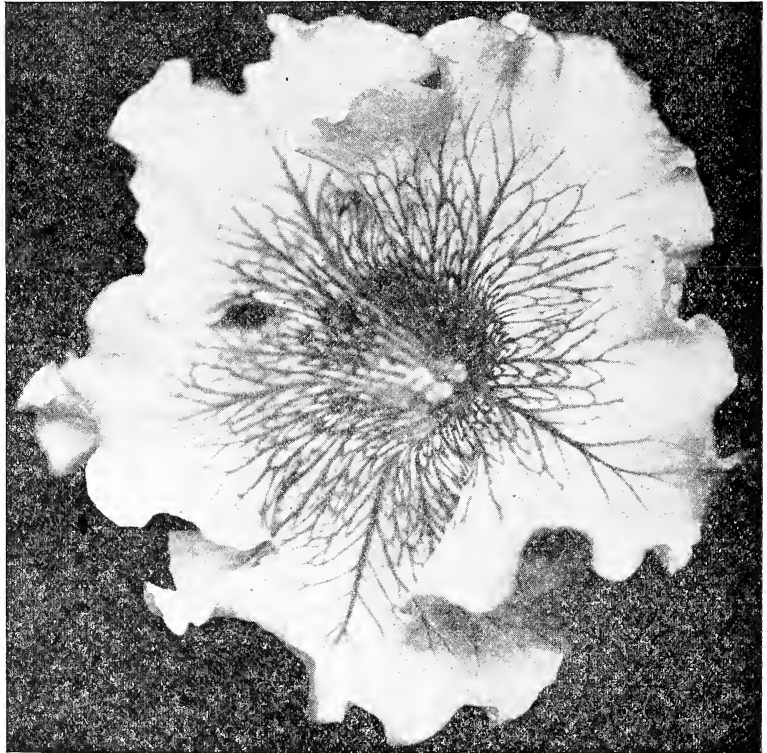
Seed may also be started in hot bed or garden. Cheese cloth may be used on seed bed.

Two Extra Fine Petunias

F024. Rosy Morn. A gay and artistic petunia for beds and borders. Color soft rose-pink with light throat. Plants set a foot apart in good soil will fill all the space with perfect mass of bloom, beginning about 60 days from sowing and never letting up until frosts. Start indoors or sow in the open. Rosy Morn usually shows a little off color, but my seed is as near perfect as has yet been produced, much purer than many others. Reduced to 10c Pkt.

F025. Viola cea. Similar in bushy habit of growth to Rosy Morn, but a beautiful deep violet color. Very rare. Reduced to 10c Pkt.

The large ones often measure 4 to 4½ inches across. And such wonderful colors and markings! Then, too, some are delightfully ruffled and frilled. Unfortunately this variety produces very, very little seed, making the seed as precious as gold dust. However, the seeds are so fine that you should get a nice bunch of plants from a packet. Pkt., 25c.



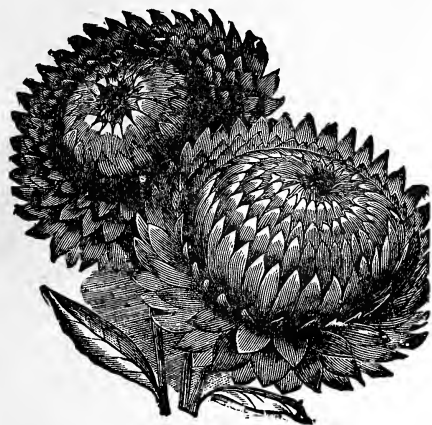
New African Marigolds

Maybe you saw the orange variety blooming in your own garden last summer, for I sent out several thousand trial packets with early orders, though did not have enough to go around. These belong to the tall growing, double "pin-cushion" class of the popular marigold. My seed was grown by a specialist, who has bred these two colors up the nearest to perfection that has so far been attained. Most of them come double, though a few come single, but of unusual shape, so that some admirers like the single even more than the double. Plants grow about 3 feet high from seed sown outdoors after ground is warm. Easily transplanted. Should be thinned to 12 inches in good ground, for they make big bushes. They bloom and bloom from midsummer to hard frosts.

F05. Orange Prince. A beauty. Deep golden orange. Immense blossoms.

F06. Lemon Queen. Equal to Orange Prince, but a soft lemon yellow, making a fine contrast. Price for either color: Pkt., 10c; ½ oz., 50c.

LONG'S Tried and True Flower Seeds



LONG'S Everlasting Flower

Very ornamental in garden, easily grown from seed sown outdoors. Particularly valuable for winter decoration of vases and everlasting bouquets. Will really keep for years. May be washed with soap and water to brighten up. An old-fashioned flower that is "coming back" strong now.

Important. Cut the flowers when partly open, just as shown in this picture. Don't put them in water but hang them up dry in dark. Place also some on shelf in dark closet, so blossoms and part of stem hang over edge of shelf. This gives curve and charm to the stems when placed in vase.

Golden Globe. Large, golden yellow.

Silver Globe. Chaste silvery-white.

Rose-Carmine. Shades of rose.

"Christmas Red." Very popular for Christmas decorations. Some florists and gardeners make a bunch of money selling this at Christmas time.

All Kinds Mixed. These and other colors all in one mixture.

Prices: Any color, or all mixed: Pkt., 10c; 3 for 25c.

LONG'S Scotch Marigolds

(*Calendula*.) Also called Pot Marigold. Grows readily from seed planted outdoors. May also be grown in pots indoors. It blooms continuously if kept picked.

Orange King. Enormous orange flowers, perfectly double.

Lemon Queen. Like Orange King but clear lemon-yellow. Double.

Nankeen. Large double cream flowers slightly flushed apricot. Unique.

Prices: Any these three fine kinds: Pkt., 10c; 3 for 25c.

F13. MIXED CALENDULA. Pkt., 5c; ½ oz., 30c.

Annual Mallow (*Lavatera*)

F015. A showy annual, about 2 feet high, producing large cup shaped shrimp-pink flowers. Sow in May and thin to 10 inches. Pkt., 10c; ¼ oz., 25c.

Delphinium, Gold Medal Hybrids

F013. A perennial, blooming second year from seed, known also as the Hardy Larkspur. The plants are of vigorous habit, with large flowers on spikes two feet long, when well grown. Colors run from pale lavender to deep blue. Pkt., 25c.

Gold Medal Delphinium Plants

Well rooted plants that will give very satisfactory blooms this season and grow larger and stronger from year to year. 3 for 50c; 8 for \$1.00.

New California Poppies

"Persian Rug" Mixture

Mr. Waller, the originator, says: "When all these colors are in bloom—red, chrome, pink, copper-red, claret, purple,—it makes you think of a beautiful Persian rug."

F09. "Persian Rug" Mixture. Pkt., 10c; ¼ oz., 50c.

Double Annual Chrysanthemum

F011. Not the large kind grown in greenhouses and so much in evidence at football games, but a smaller flowered variety that blooms in the open garden from seed sown in spring. Nice for garden display and good for cutting. Most of the flowers come double. Mixed colors. Pkt., 10c; ¼ oz., 25c.

Japanese Morning Glory

F72. Colors run from white through all shades of blue and red; from palest pink to darkest reds and purples. Many flowers streaked, mottled and bordered. The leaves are also very ornamental, ivy-like and heart-shaped, green and marbled. Climbers. Plant in warm location. Pkt., 10c; oz., 30c.

LONG'S Ageratum (Floss Flower)

Dwarf, compact plants, fine for borders, edgings or pots.

F1, Blue; F2, White; F3, Choice Mixed. Price for any kind: Pkt., 5c; ¼ oz., 25c.

LONG'S Sweet Alyssum

Exceedingly popular border plant, useful in many ways in any garden. Puts the "finishing touch" to beds, walks, etc. Snow white; comes quickly from seed, and blooms continuously.

F4. LITTLE DORRIT. Similar to Little Gem but still more compact and a finer variety. Pkt., 10c; ¼ oz., 25c; ½ oz., 40c.

F4½. LILAC ALYSSUM. Same as white, but lilac color. Pkt., 10c.

LONG'S Amaranthus

Graceful plants with ornamental foliage producing a striking effect as a background or centerpiece.

F5. All Kinds, Mixed. Pkt., 5c; ½ oz., 15c.

LONG'S Antirrhinum (Snapdragon)

F7. LONG'S SPECIAL MIXTURE. Largest and finest kinds in rare variety of colors, for cut flowers or garden display. Pkt., 10c.

Separate Colors Snapdragon. White, Pink, Yellow, Red. Pkt., 10c.



Alzssum



Snap Dragon



Canterbury Bell



Four o'Clock

LONG'S Bachelor's Button

DOUBLE BACHELOR BUTTON. Delightfully superior to the old single type. F0½ White, F01 Blue, F02 Rose, F03 Mixed—all at 10c pkt.

F8. **SINGLE MIXED.** Pkt., 5c; ½ oz., 20c.

LONG'S Balloon Vine

F9. Hardy annual climber, producing white flowers and seed vessels that look like small balloons. Good for screens. Seeds hard and should be soaked 24 hours. Pkt., 5c; ½ oz., 15c.

LONG'S Balsam (Lady Slipper)

Grows quickly from seed, producing large brilliant flowers. Also called "Touch-Me-Not." Great favorite with children.

F11. **DOUBLE MIXED.** Pkt., 5c; ½ oz., 25c.

LONG'S Calliopsis

F14. Bush plants 2 feet high, covered with showy flowers. Pkt., 5c; ½ oz., 15c.

CALIFORNIA POPPY (See *Eschscholtzia*)

LONG'S Canary Bird Flower

F15. Rapid growing climber, 10 feet. Flowers canary yellow, and resembling a canary bird. Fine for porches, etc. Soak 24 hours. Pkt., 5c; ½ oz., 20c.

LONG'S Candytuft

F17 **PURE WHITE**; F18 **FINE MIXED.** Pkt., 5c; oz., 25c.

GIANT HYACINTH-FLOWERED. New. Extra large and fine. Pkt., 10c.

LONG'S Canterbury Bells

Hardy biennials, blooming second year from seed. Plants 3 ft. high. Flowers bell shaped, and many colors. Very showy. Sow from May to August.

F19. **LONG'S SPECIAL MIXTURE.** Single, double, and "cup and saucer" varieties; all mixed; very fine. Pkt., 10c.

LONG'S Hardy Carnations

Biennials. These lovely fragrant carnations are the most profuse bloomers of all the so-called pinks.

F20. **MARGARET.** Double flowers with lovely fringed petals; delightfully fragrant; wide range of charming colors. Extra fine. Pkt., 10c; ¼ oz., 35c.

LONG'S Celosia or Coxcomb

F22. **OSTRICH PLUME.** Feathered varieties mixed. Pkt., 5c; ¼ oz., 25c.

F23. **CRESTED COXCOMB.** Dwarf plants with bright red combs. Pkt., 10c.

LONG'S Cobaea Scandens

(Cathedral Bells)

F24. Rapid growing climber, 15 to 20 feet in a few months. Has lovely lilac bell shaped flowers. Plant seeds on edge. Pinching few inches off top of plant when 6 inches high or so will make it branch out and produce denser covering. Pkt., 10c; ½ oz., 25c.

LONG'S Columbines (Aquilegia)

Early blooming hardy perennial with graceful long spurred flowers. Very showy.

F25. **TRUE ROCKY MOUNTAIN COLUMBINE.** The Colorado State flower, and most popular of all columbines. White center with blue petals. Pkt., 10c; ¼ oz., 40c; ½ oz., 75c.

F26. **MIXED COLUMBINES.** Good variety of colors. Single and double, mixed. Pkt., 10c.

LONG'S Early Giant Cosmos

Heretofore it has been necessary to list two strains of cosmos, the early with small flowers, and the late or giant flowering.

I now offer you this "2-in-1" strain, combining earliness with fine large flowers.

F27 **WHITE**; F28 **PINK**; F29 **CRIMSON**; F30 **FINE MIXED.** Your choice of any of these colors, or mixed; Pkt., 10c; ½ oz., 25c.

LONG'S Cypress Vine

F31. Beautiful rapid growing climber with feathery foliage and star-shaped blossoms. Soak seed 24 hours in warm water. Pkt., 10c; ½ oz., 25c.

LONG'S Double Daisy

The poet's favorite flower, perennial, blooming first year from seed. Very neat for borders.

F32 **PINK**; F33 **WHITE**; F34 **MIXED.** Price for either color or mixed; Pkt., 10c.

LONG'S Shasta Daisy

F35. **SHASTA DAISY.** Originated by Burbank. Large white flowers on long stiff stems, great bloomer, fine for cutting, perennial; roots may be divided after a few years and reset. Pkt., 10c.



California Poppy



Carnation



Cobaea Scandens



Celosia

LONG'S California Poppies

Blooms early and continuously from spring sown seed. Seeds itself after first year. Fine for beds or borders.

F36. GOLDEN WEST. Large yellow; the California State flower. **F37. WALLER'S CRIMSON,** the best fixed strain of carmine-crimson, extra fine. **F38. LONG'S BRILLIANT MIXTURE,** of best kinds and colors. Price, any kind: Pkt., 5c; ½ oz., 25c.

LONG'S "Forget-Me-Not"

F32. Hardy perennial and one of the daintiest of garden favorites. Blooms first year and better next. Color blue. Pkt., 10c; ¼ oz., 25c.

LONG'S Four o'Clock

F39. Good old-fashioned easy-to-raise flower, splendid for hedge, center or background. Mixed colors. Pkt., 5c; oz., 20c.

LONG'S Fox Glove

F40. Tall perennial with spikes of vari-colored and spotted tube-like flowers, blooming second year from seed. Pkt., 10c.

LONG'S Gaillardia

F41. Compact bushy plant bearing large brilliant flowers. Fine mixed. Pkt., 5c; ¼ oz., 25c.

LONG'S Geranium

F42. Perennial, blooming first year from seed if started early. Fine mixed. Pkt., 15c.
F033. GRAND ZONALE. Mixed. Pkt., 25c.

LONG'S "Satin Flower" (Godetia)

F43. Hardy annual about 18 inches tall, bearing many showy flowers of satiny texture in rich and varied colors. Does well in poor soil and somewhat shady places. Fine mixed. Pkt., 5c; ¼ oz., 25c.

LONG'S Curious Gourds

Don't overlook these for the children. Easily grown, rapid climbers, tender, sow after danger from frosts.

F44. NEST EGG. Grow your own nest eggs. Give the hen an inspiration. Plant this seed in poor soil lest you raise an ostrich egg. Pkt., 5c; ½ oz., 15c.

F45. DIPPER. Dippers are now so high that it might pay to grow your own dippers and be independent of the dipper trust. Pkt., 5c; ½ oz., 15c.

F46. MIXED GOURDS. Ornamental gourds, large and small, all shapes and colors. Many odd, fantastic varieties. Pkt., 5c; ½ oz., 25c.

LONG'S Gypsophila

Graceful plants of light fairy-like growth, covered with tiny white flowers. In great demand for combining with sweet peas and other cut flowers. Note that there are two kinds, the annual and perennial.

F47. ELEGANS (ANGEL'S BREATH) ANNUAL. Blooms first year from seed. Not so dainty as the perennial. Good plan to sow both kinds this spring, so as to have a supply this year and next. Pkt., 5c; oz., 25c.

F47½. Same as F47 above, but dainty pink. Annual. Pkt., 10c.

F48. PANICULATA (BABY'S BREATH) PERENNIAL. Blooms second year from seed and increases in size of plants each year. The tiny white flowers on branched stems are so thick as to give the plant a white lace-like effect. A "perfect dream." Pkt., 10c; ½ oz., 25c.

F049. DOUBLE GYPSOPHILA. New. This comes part semi-double and single. About one-fourth comes double. Perennial. Color white. Pkt., 25c.

LONG'S Heliotrope

F50. Perennial, blooming first year from seed. Choice mixed. Pkt., 10c.

LONG'S Double Hollyhocks

The modern double hollyhocks bear flowers as double and beautiful as the most charming rose. My double varieties in seed and plants are of the finest. Biennial.

F51. Extra fine mixture of double flowering kinds. Pkt., 10c; ¼ oz., 25c.

SEPARATE COLORS DOUBLE HOLLYHOCKS: **F52** White. **F53** Yellow. **F54** Red. **F55** Pink. **F56** Blush. **F57** Maroon. **F58** Black. Choice of colors. Pkt., 10c.

F51. "COLORADO SUNSET" HOLLYHOCK. Rose-flowered double type. Color varying from apricot to bronze. Pkt., 25c.

F59. SINGLE HOLLYHOCKS. Mixed. Pkt., 5c.

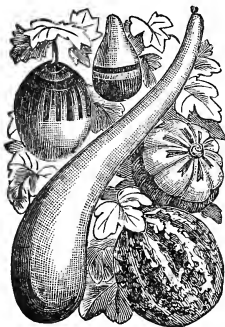
See Plant Pages for Hollyhock Roots

LONG'S "Job's Tears"

F61. Curious ornamental grass with hard seeds used for beads. Pkt., 10c; ¼ lb., 25c.

LONG'S Japanese Hop

F62. A rapid growing climbing vine much used for covering unsightly objects and for shading windows and porches. Soak seed 12 hours. Pkt., 10c; ½ oz., 25c.



Mixed Gourds



Gypsophila



Japanese Hop



Marigold

LONG'S Annual Larkspur

- F63.** Dwarf Mixed. Pkt., 5c; ½ oz., 25c.
F64. Tall Mixed. Pkt., 5c; ½ oz., 25c.

LONG'S Scarlet Flax

- F65.** Slender plant with bright red saucer-shaped flowers. Very showy and easy to grow. Pkt., 5c; oz., 25c.

LONG'S Marigolds

- F67. FRENCH DWARF.** Mixed. Pkt., 5c; ½ oz., 25c.
F67½. "LEGION OF HONOR." Rich golden yellow flowers, marked velvety brown. Fine for borders and edging. Pkt., 10c; ½ oz., 30c.
F68. AFRICAN TALL. Mixed. Pkt., 5c; ½ oz., 25c.

LONG'S Mignonette

No garden is complete without this old-fashioned fragrant flower. Comes into bloom soon.

- F69. LONG'S SPECIAL MIXTURE.** Extra fine varieties mixed. Pkt., 5c; ½ oz., 25c.

LONG'S Morning Glories

- F70. TALL.** Always popular for fences and screens, etc. Fine mixed. Pkt., 5c; oz., 20c.
F71. DWARF. Good for beds or borders. Pkt., 5c; oz., 25c.

LONG'S Mexican Fire Bush

- F73.** Also called Summer Cypress. The moss-like green foliage turns to deep carmine in fall. Makes inexpensive showy hedge. Improved giant strain. Pkt., 10c; ½ oz., 25c.

LONG'S Scabosia

- F74.** Also known as Pincushion Plant. Flower stems are long and keep well in water. Fine mixed. Pkt., 5c; ½ oz., 25c.

LONG'S Nicotiana

(Flowering Tobacco Plant)

- F75.** Blossoms something like petunia but with longer tubes. Flowers very fragrant and showy. Pkt., 5c; ¼ oz., 25c.

LONG'S Delightful Petunias

Great bloomer. Very showy and fragrant. My Giants of California are simply marvelous in size, forms and colors.

- F88. CHOICE MIXED.** Splendid mixture of single varieties. Pkt., 10c; ¼ oz., 35c.
F89. GIANTS OF CALIFORNIA. Extra large flowers of every conceivable shade. Many blossoms ruffled. Truly wonderful.

Giant Petunias have one fault—they produce very little seed, almost none. Seed is therefore very expensive. Pkt., 25c.

LONG'S Nasturtiums (Dwarf)

About one foot high and very effective. They bloom and bloom and bloom. The more you pick them the more they bloom. Fine for beds and borders, also for planting in rings around trees. Stand hot location better than many other flowers. Easy to raise. Tramp soil after planting so it will come in contact with all portions of the ribbed seed. Soaking seed 24 hours will also hasten germination. Sow any time from first of April to July.

- F76. LONG'S SPECIAL MIXTURE.** Extra fine mixture of Dwarf sorts, always giving pleasing results. Large Pkt., 10c; oz., 15c; ¼ lb., 50c.

Separate Colors Dwarf Nasturtiums

- F77. EMPRESS OF INDIA.** Crimson. Foliage dark.
F78. GOLDEN KING. Rich orange-yellow.
F79. KING THEODORE. Velvety crimson.
F80. PEARL. Light lemon-yellow or primrose.
F81. VESUVIUS. Rich deep apricot.

Any separate color: Pkt., 10c; oz., 20c.

LONG'S Nasturtiums (Tall)

Fine for covering trellises, stumps, fences, etc. Very showy when planted at top of steep bank and allowed to run down the bank. Or may be allowed to ramble in any location. Flowers larger and stems longer than the dwarf kinds.

- F82. LONG'S SPECIAL MIXTURE.** Fine assortment of large flowering tall or climbing nasturtiums. Large Pkt., 10c; oz., 15c; ¼ lb., 50c.

Separate Colors Tall Nasturtiums

- F83. KING THEODORE.** Crimson-maroon.
F84. ROSE. Bright soft rose.
F85. SCARLET. Bright scarlet.
F86. SUNLIGHT. Clear rich yellow.
F87. VESUVIUS. Salmon-rose.

Any separate color: Pkt., 10c; oz., 20c.

LONG'S Phlox Drummondii

For beds and massing nothing surpasses these beautiful annuals.

- F91. GRANDIFLORA MIXED.** Pkt., 10c; ¼ oz., 50c.

LONG'S Pinks (Dianthus)

Hardy sweet scented annuals blooming all summer in variety of brilliant colors.

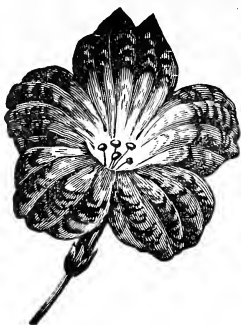
- F94. HEDEWIGGII.** Finest of all pinks. Great variety of colors. Pkt., 10c; ¼ oz., 50c.



Morning Glory



Pink



Salpiglossis



Verbena

Long's Gorgeous Poppies

Wonderfully brilliant and always popular flowers. Sow where wanted, as difficult to transplant.

F94½. BRILLIANT BEAUTIES. My special mixture of finest double and other charming sorts in wide range of colors. Pkt., 5c; ½ oz., 25c.

F95. "TULIP POPPY." Vivid scarlet. Pkt., 10c; ½ oz., 35c.

F96. SHIRLEY. A beautiful single poppy, white, pink, lavender, purple, crimson, all mixed. Pkt., 5c; ½ oz., 25c.

F96½. ICELAND. (Perennial.) Very hardy, fragrant, blooms first year from seed, good for cutting. Fine mixed. Pkt., 10c; ½ oz., 25c.

F97. ORIENTAL. (Perennial.) Tall and showy. Scarlet flowers. Looks well among shrubs. Pkt., 10c; ½ oz., 25c.

Long's Castor Beans

F98. Tropical looking plants growing to immense size from seed sown after danger from frost. Richer the ground the bigger they grow. Good for backgrounds and centerpieces. Children enjoy seeing them grow so quickly to size of trees 6, 8 or 10 feet tall. Pkt., 10c; oz., 25c.

Long's Portulaca

(Moss Rose)

F99. SINGLE MIXED. Pkt., 5c; ¼ oz., 25c.

F100. FINE DOUBLE MIXED. Pkt., 10c.

Long's Velvet Trumpet

Salpiglossis

F101. Very showy plant with trumpet-shaped blossoms in rare combinations of color, beautifully marbled and penciled. Pkt., 10c.

Long's Salvia (Scarlet Sage)

F102. Standard bedding plant where brightness of color is wanted. Flowers borne in spikes of fiery red, lasting long time. Pkt., 10c.

Long's "Hit or Miss"

F125. Great mixture of many kinds flower seeds—as one customer said, "It's all hit and no miss." Something new nearly every day after begins to bloom. Makes a good hit with all who try it. Pkt., 5c.

Long's Double Sunflower

F105. The grandest of all sunflowers, 7 feet high, with a dozen or more blossoms on each stalk. Flowers perfectly double, resembling chrysanthemums, and of a rich golden yellow color. Perfectly gorgeous for centerpiece or background, very hardy, easily grown from seed. Pkt., 10c; oz., 25c.

Long's New Red Sunflower

F106. Originated here in Boulder. Valuable as a novelty only. Does not come all red. More brown than red, some flowers other colors, as color not yet fixed. Many of the combinations of colors are as interesting as the real red. Pkt., 10c; ½ oz., 25c.

Long's Stocks—Ten Weeks

103½. "Cut and come again" fragrant annual. Profuse bloomer. Colors range through all the soft and distinct shades. Pkt., 10c.

Long's Sweet Sultan

F107. Delightfully fragrant flowers with small fringed petals. Easily grown. Something like Bachelor's Button. Choice mixed. Pkt., 5c; ¼ oz., 15c.

Long's Sweet William

Well known hardy perennial producing gorgeously colored fragrant flowers.

F108. SINGLE MIXED. Pkt., 5c; ¼ oz., 15c.

F109. DOUBLE MIXED. Pkt., 10c; ¼ oz., 35c.

Long's Verbenas

F110. MAMMOTH MIXED. Also, Red, White, Purple, or Pink. Your choice, Pkt., 10c.

Long's Wild Cucumber

F115. One of the quickest growing annuals, 30 feet in a season sometimes. Foliage dense, great for shade. Produces many white blossoms, followed by ornamental prickly seed pods. Will self sow after first season. Soak seed in warm water 24 hours, or cut small portion of shell away from germ end (the pointed end). Pkt., 10c; oz., 25c.

Long's Dazzling Zinnias

See page 24 for large picture and description of this good old-fashioned garden favorite.

New Asters for 1924



New "Betty Jung" Aster

This new aster was originated by J. W. Jung, who originated the famous American Beauty and other wonderful asters, and grows most of my finest aster seed every year. I've never seen this aster yet, but know it must be extra good, else Mr. Jung would not have named it for his cute little daughter, "Betty."

Here is Mr. Jung's own description: "This new aster outrivals anything we have yet seen in asters, and we have been growing and improving them for 17 years. The above cut is from a photograph. 'Betty,' our daughter, is 3 feet tall. Many of the flowers reached up to and above her head. This is by far the longest stemmed aster to be had."

"Plants are very vigorous. Instead of producing a large number of lateral stems the entire strength seems to go towards producing from 6 to 10 long main stems, each of which is crowned with one of the mammoth flowers."

"The flowers are giant in size, very full and double, and of lasting quality. Yet this aster comes into flower early, for one so large; before the late branching type."

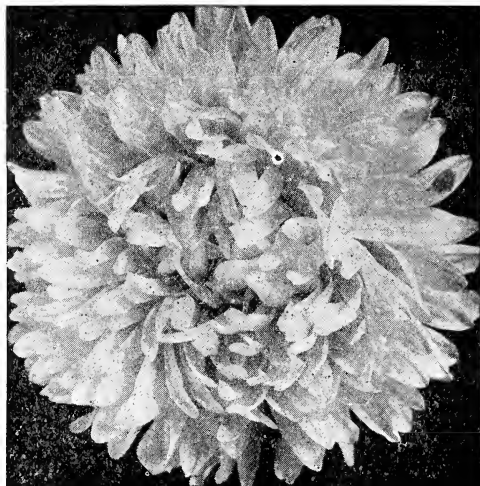
"Its color is a live bright rose-pink. It does not have that bluish or faded-out appearance of so many rose-colored asters. It shows up unusually fine in artificial light."

That sounds mighty good to me. I doubt if I can grow this aster as large as Mr. Jung can, but I'm sure going to plant a lot of it.

"Betty Jung" Aster Seed sold in packets only. Small pkt., 15c; 2 pkts., 25c; large pkt., 50c.

Giant "Peach Blossom" Aster

Similar in type to the American Beauty. Stems very stout and of good length. Flowers large. Color suggests its name, "Peach Blossom." Fairly early for so large an aster. Pkt., 15c; 2 Pkts., 25c.



Fancy Yellow Aster

As you may know, yellow—a real, deep, rich, yellow—is a color still sought for in asters. But here's a light yellow, that will help some. It is fairly large and fully double, and considered the best yellow produced up to this time. Pkt., 15c; 2 Pkts., 25c.

Everlasting Aster

Color flesh-pink. It resembles a large Helichrysum (Straw Flower). When cut and dried it retains its color and shape like an everlasting flower. (To dry, hang asters in cool, shady place.) Pkt., 10c.

LONG'S Aster Plants

(Not Mailed Beyond 6th Zone)

Orders for plants are taken with the understanding that the plants will be sent when ready for setting out, the time depending on the season. We accept orders up to about July 4th. If I have good "luck" with my plants we will be liberal in our count. Ready about June 1st. Now when I say "about June 1st," I'm something like the old maid who told the census taker she was "about 30 years old." Some seasons the plants are not ready until the 10th to 15th of June. If you wish them earlier you can buy the seed and start them indoors. Bear in mind asters do well sown right outdoors any time from middle of April to last of May.

I have good success with my outdoor grown small Aster Plants, setting them out along about the first of June—from that on to the 25th.

MIXED ASTER PLANTS. Popular cut flower mixture. 16 plants (smallest quantity sold), 50c; 40 for \$1.00; 100 for \$2.00; prepaid.

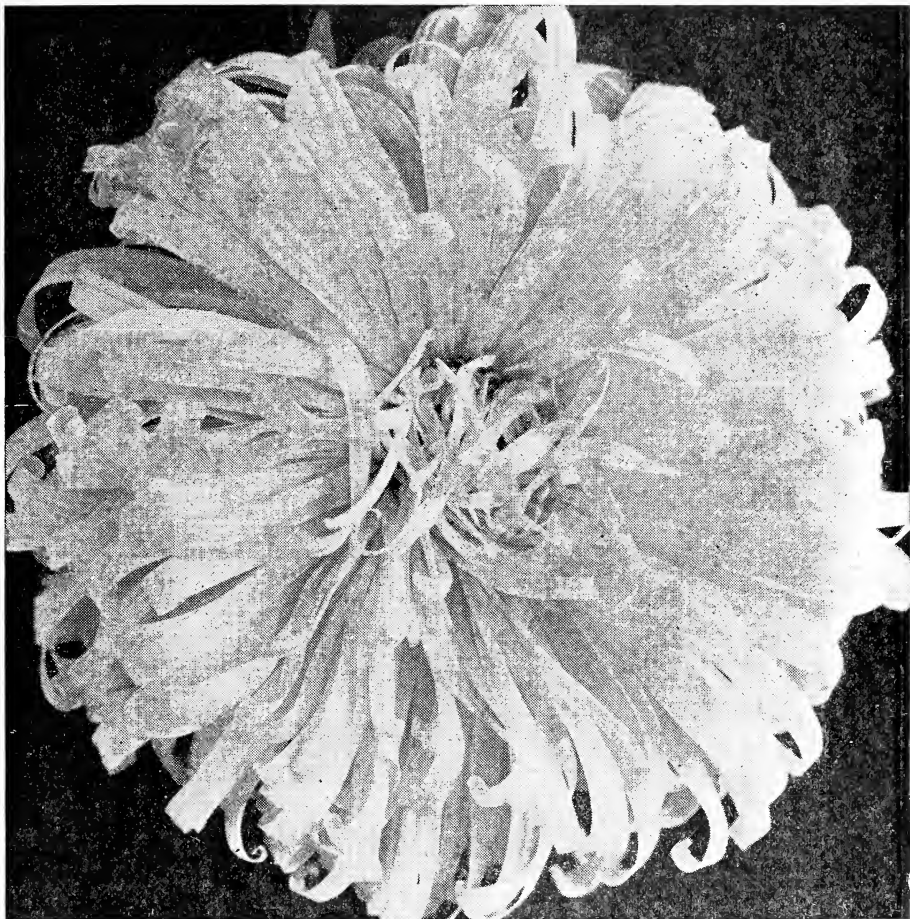
PLANTS IN SEPARATE COLORS. White, Pink, Lavender, Purple and American Beauty. Your choice, 12 (smallest quantity sold), for 50c; 33 for \$1.00; 75 for \$2.00; prepaid.

"BETTY JUNG" ASTER PLANTS. 10 plants (smallest quantity sold), 50c; 30 plants, \$1.00; prepaid.

LONG'S Shasta Daisy Roots

Hardy perennial, blooming nearly all summer, the plant increasing in size and strength for several years, when the large clump then formed may be divided and re-set. 2 for 50c; 5 for \$1.00; prepaid.

LONG'S SUPERB GIANT ASTERS



Aster, showing shaggy, ragged, type of both the Giant Crego and Astermum, much admired by many, because they resemble the choice Japanese Chrysanthemums. These Chrysanthemum-like asters are included in **LONG'S** Special Mixture for 1924.

LONG'S Giant Crego and Astermum

These two varieties are somewhat different, yet so much alike that I am going to mix the two, giving you both in one packet of white, rose-pink and lavender. Have never been able to get Astermum in shell-pink, so give you straight Crego in that color of the shaggy type aster.

Crego branches more than the Astermum, and stems are more slender, though hold the flowers well. Both, when well-grown, have immense blossoms and both keep well as cut flowers. The two, Crego and Astermum, mixed in separate colors, as follows: **A8** Pure White; **A9** Rose Pink; **A10** Lavender; **A11** the three colors mixed. All at 10c pkt.; 3 pkts., 25c.

Crego, **A11½**, Shell-Pink, pkt., 10c; 3 pkts., 25c.

LONG'S Special Mixture

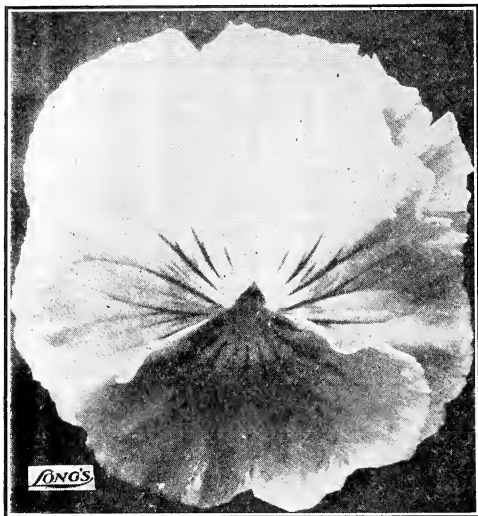
Might well be called my "All-in-One" Mixture. In making this superb 1924 mixture I have used some of all the Asters and Astermums offered in this catalogue, putting in most liberal amounts of the kinds best for cut flowers—plenty of white and pinks as well as the new American Beauty.

Price for **Long's Special Mixture**: Pkt., 15c; 2 for 25c. In bulk at: ¼ oz., 50c; oz., \$1.50.

Asters (In Separate Colors)

My best Giant Asters, selected from the different types, Semples, Crego, Royal, Astermum, etc. Several types in each color. **A2** Snow White; **A3** Crimson; **A4** Shell Pink; **A5** Rose Pink; **A6** Purple; **A7** Lavender. Pkt., 10c. Any 3 pkts., 25c.

LONG'S Super-Giant Pansies—Seeds and Plants



LONG'S Super-Giants, Mixed Colors

P1. Flowers of gigantic size, some light, some medium in color, and some deep velvety colors that you may never have believed could be had in pansies. Many blossoms are frilled and ruffled like a Spencer sweet pea.

In **LONG'S** Super-Giants are found the solid colors; others veined, margined, blotched, shaded, blended. Havana brown, mahogany, bronze and copper shades of the Masterpieces and Bugnot; the Giant Carnot and Giant McKinley—these favorites and many others are included in this, my finest mixture. Packet (200 seeds), 25c; 5 pkts., \$1.00; ¼ oz., \$2.50.

Many customers order five packets, plant several and give the others to friends. Certainly a delightful present.

LONG'S Other Fine Pansies

(Seeds only, no plants.)

P2. LARGE FLOWERING. Mixed. Pkt., 10c; ¼ oz., \$1.00.

P3. DARK NAVY BLUE. Pkt., 10c.

P4. JET BLACK. Of large size. Pkt., 10c.

P5. WHITE. Large. Pkt., 10c.

P6. GOLDEN YELLOW. Large. Pkt., 10c.

P7. MAD. FERRET. Lovely shades of pink and rose. Pkt., 15c.

P28. GIANT MASTERPIECE. (Spencer Pansies.) Many petals curled; flowers appear double; mostly dark, velvety shades. Mixed. Pkt., 15c.

P9. GIANT BUGNOT. Shades of red, bronze, and reddish cardinal. Mixed. Pkt., 15c.

P10. GIANT PRESIDENT CARNOT. White ground with five rich violet blotches. Pkt., 15c.

P11. GIANT PRESIDENT MCKINLEY. Rich glowing yellow, each petal blotched with deep reddish brown. Pkt., 15c.

P12. GIANT BRONZE. Bronze and brown shades predominate, but many do not come bronze. Pkt., 15c.

100 Pansy Plants for \$2.00, Prepaid

Hardy, outdoor plants from Super-Giant seed, sown last fall. The plants are wintered right out in the open, some slightly covered, some not covered at all.

Unlike most florists, I study to hold the tops back and develop a lot of strong fibrous roots for each plant. This is just the reverse from usual practice of forcing the tops by growing the plants in heavily manured ground and forcing them into bloom under glass.

My ideal plant for setting out is one with strong roots and small tops. If tops are too large I may prune them back. This kind of plant stands shipping fine, and will "take right a hold" and make good in your garden. I seldom transplant the large plants, but use the smaller ones described above.

I can ship these pansy plants almost any time after ground is thawed out in the spring. Early in April is a good time. Have made several sowings so as to have them coming on all spring until June. The latest plants went into winter quarters with only several tiny leaves, while the earlier ones were good husky plants, some in bud, others in bloom. Please understand that I do not promise any of these to be in bud or in bloom, though some in each order usually are. It just depends on the season and how fast the orders come in. It is better to set out a small plant early than a large one late. The small early set plants bloom very soon.

Don't be afraid to set these plants out early. They are used to snow and ice. Get the full season's joy from your pansy bed. Sold in mixed colors only. 16 (smallest order packed), 50c; 40 for \$1.00; 100 for \$2.00; 300 for \$5.00; prepaid.

Pansy Plants In Bloom

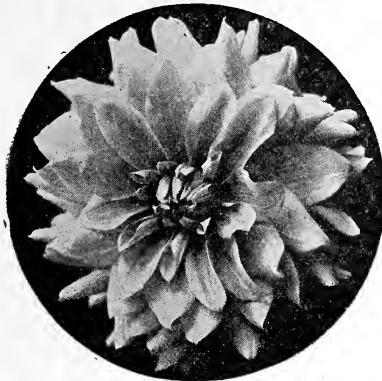
Note that plants on opposite page are my favorite transplanting size. They may be quite small, not in bud, though often are in bud and sometimes in bloom, all depending on how the orders come in as the plants keep growing. With them the roots are the main consideration. Tops soon develop in your garden.

But for those who want immediate effect, I shall have, this year, some "wintered outdoors" Pansy Plants in full bloom, though not forced plants. Roots are the thing, and roots my plants shall have.

These "ready-to-wear" plants take more room—cost more to grow, handle, pack and mail. Price just double that of the transplanting size: 16 (smallest order packed), \$1; 40 for \$2; 100 for \$4; 300 for \$10; prepaid. Mixed colors only, though if you request part of them a certain color we will try to comply, but we cannot promise to send any certain colors, or a certain amount of a color. Our plan is to grow them in mixture and sell them the same way.

PLANTS FOR MEMORIAL DAY. Better place your order ten days ahead, as I anticipate greater demand than I can supply. Still better, order the small size a few weeks or month ahead, and they will be in bloom May 30th.

LONG'S DELIGHTFUL DAHLIAS



This illustrates the appearance of the Decorative type of dahlia, such as *Pride of California*. For Cactus type see *Bride's Bouquet*. For Peony type see *Sweetheart's Bouquet*. For Show type see "*Dee-Lighted*."

Price following each variety is for one tuber with good eye. Each tuber makes a big plant.

Many prices reduced for 1924

- D1. PINK PEARL.** (Cactus.) Soft pink. 25c.
D2. MOONBEAM. (Decorative.) Canary yellow. 25c.
D3. CHARLES CLAYTON. (Cactus.) Vivid red. 25c.
D5. DELICE. (Dec.) Rose pink; one of best for cutting. 25c.
D6. LA GRAND MANITOU. (Dec.) Gigantic flower, white, striped and splashed reddish-violet. Sometimes solid purple. 25c.
D7. D. M. MOORE. (Show.) Deep velvety maroon; monster flower. 35c.
D13. W. W. RAWSON. (Show.) White, overlaid with delicate lavender. Large. Similar to Grand Duke Alexis but better. 25c.
D16. GOLDEN WEST. See page 37. 50c.
D17. "DEE-LIGHTED." (Show.) Largest show dahlia I ever saw. Pure white. Makes 'em all sit up and take notice. A wonder. 30c.
D19. CHIPETA. See page 37. 50c.
D21. NAIAD. (Dec.) New. Tall, free blooming plant; stems remarkably long. Color a tinted cream pink. Beautiful by day and a dream under artificial light. Reduced from \$1.00 to 50c.
D23. MINA BURGIE. (Dec.) New. Said to be finest crimson decorative dahlia known. 30c.
D26. F. W. SCHIEFF. See page 37. 50c.
D27. LAURA BARNES. (Peony.) New. Clear orange-red. Grand indeed. 50c.
D28. SOUTH POLE. See page 37. 50c.
D29. MRS. WARNAAR. (Hybrid Cactus.) Creamy white, with just a tinge of pink. A mammoth hybrid cactus; often 9 inches in diameter in our climate. Each, \$1.00.
D30. ATTRACTION. (Cactus.) Large elegant flowers of clear lilac-rose; long strong stems; an exhibition and garden sort of rare merit. \$1.00.
D31. GERO'S PINK. (Show.) Rich deep pink. Petals quilled. 50c.

D33. MAUDE ADAMS. (Show.) New. White, overlaid with delicate pink. Very free bloomer and good cutting variety. 25c.

D39. GEO. WALTERS. (Cactus.) A monster; stems long and wiry; salmon-pink, shaded to old gold. \$1.00.

In my opinion, this dahlia belongs in class of many priced from \$2.00 up. Each, \$1.00.

D40. PAKASKA, or BUFFALO BILL. (Dec.) New. A shaggy decorative dahlia of immense size. Color between apricot and fawn, with pink shading. Blooms so profusely that should be disbudded. Each, \$3.50. (\$5.00 last year.)

D41. LAWRENCE RUPPEL. (Peony.) New. Large fluffy flower of rich coppery-red, shaded apricot. Each, \$1.00. (\$2.00 last year.)

D44. SOUV. ST. MIHIEL. (Show.) New. Tall plant. Large flower of darkest crimson-red or maroon. Each, \$1.00. (\$2.00 last year.)

D46. DREER'S WHITE. (Show.) Pure white, medium size. 25c.

D50. LUCY DAVIS. (Dec.) New. Rich golden apricot; clear, without shading. Blossoms immense; stems long, strong and wiry. A Colorado dahlia, originated by R. T. Davis, Jr. Each, \$2.00.

D52. MRS. CARL SALBACH. (Dec.) Extra large and beautiful. Stems remarkably long and stout, holding the flower right up so it looks you in the face. Great for cutting and keeps well. Sold for \$2.00 last year. Special for 1924, \$1.00 each.

D54. MRS. W. E. ESTES. (Hybrid Cactus.) One of the finest of all pure white dahlias. Blossoms immense in size. Form between that of cactus and peony type. Good long, strong stems. Plant grows very tall. I had some last year so tall that I could not reach up to some of the blossoms. Each, \$1.50.

D56. MELROSE. (Dec.) A new bright lilac-pink dahlia originated by R. T. Davis, Jr., and named for his small son, Melrose. Flowers stand well above the foliage for garden display and keep longer than most dahlias when cut. The vase of Melrose dahlias I displayed at the Boulder County Fair last fall kept exceptionally well. \$1.00.

D58. NINFEEA. (Hybrid Cactus.) Soft lavender-pink, shading to creamy white in center, its upturned petals resembling a water lily, from which it derives its name, Ninfeea, being Spanish for water lily. \$1.50.

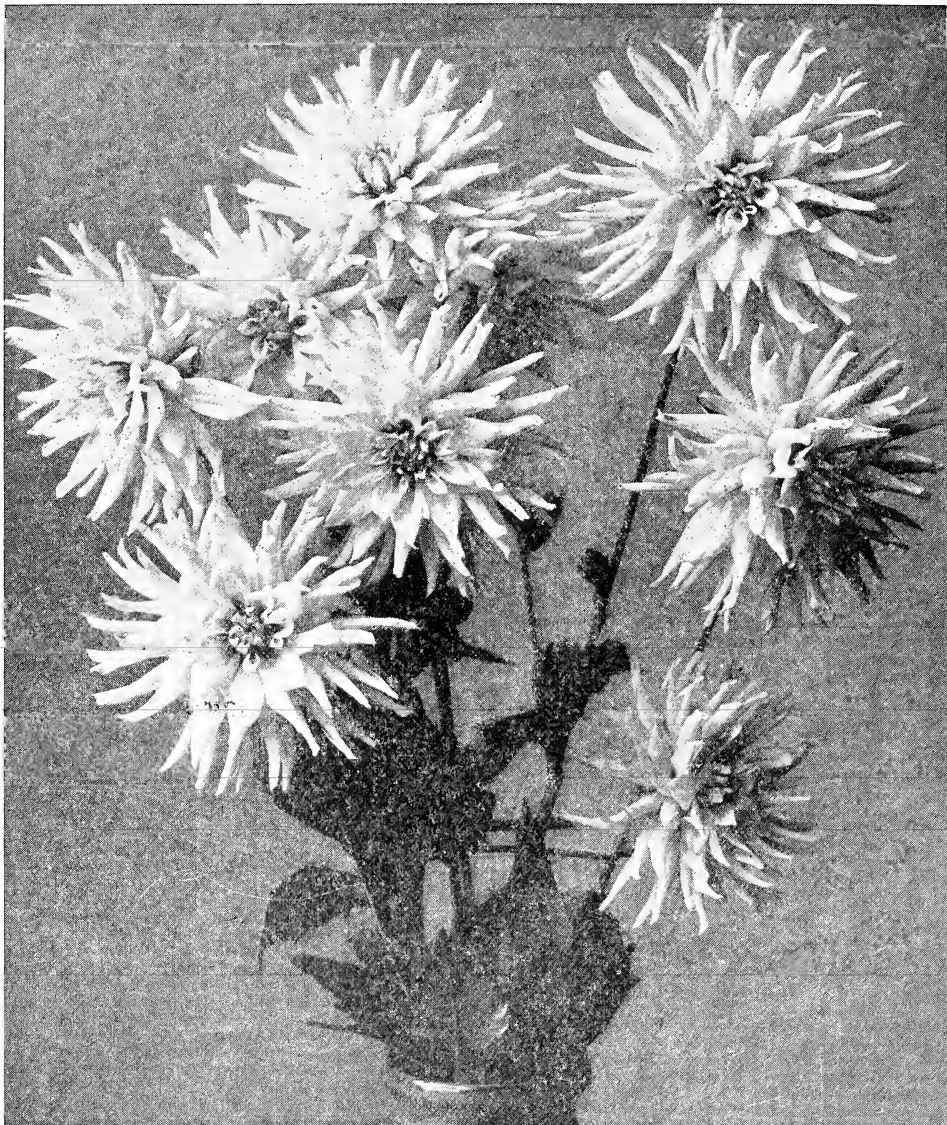
D62. PRIDE OF CALIFORNIA. (Dec.) A monster red dahlia. Exceptionally fine decorative dahlia, vivid red. Stems good. Attracted all who saw it in my garden last season. Reduced from \$1.00 to 50c for 1924.

D64. MILLIONAIRE. (Dec.) Clear, rich orchid, shading to almost white in center. Blossoms gigantic, but few in number. I'm not crazy about it, but seems to be quite a favorite with many. Each, \$1.00.

D68. PATRICK O'MARA. (Dec.) Color, unusually soft and pleasing shade of orange-buff, slightly tinged with rose. Flowers firmly held at right angles on strong stems. Keeps well when cut. Each, \$1.00.

7 Lost Label Dahlias, \$1.00

No certain kinds or colors, as many are from lots from which labels have been lost. May be several alike. Can't tell. But will be a good dollar's worth.

LONG'S Delightful Dollar Dahlias for 1924**Bride's Bouquet (Cactus) Originated in Colorado by W. W. Wilmore**

D70. BRIDE'S BOUQUET. The ideal white cactus dahlia. Flowers pure white, medium to large, of perfect form. Stems remarkably long and strong, holding the blossoms at right angles. Note how they stand up and look you right in the eye. When cut, it is one of the most lasting. The vigorous and well-branched plants bloom early and profusely. Strong tubers, \$1.00 each.

Note. For descriptions of some, see page 35.
D30. ATTRACTION. Very large cactus. \$1.00.
D68. PATRICK O'MARA. \$1.00.

D29. MRS. WARNAAR. A Holland dahlia of unusual merit. See page 35. \$1.00.

D39. GEO. WALTERS. One of the biggest cactus dahlias grown. A wonder. \$1.00.

D41. LAWRENCE RUPPEL. Each, \$1.00.

D44. SOUVENIR ST. MIHIEL. Petals beautifully quilled. Color unusual. \$1.00.

D52. MRS. CARL SALBACH. I consider this one of the very best I've seen to date. \$1.00.

D56. MELROSE. This is another one of my favorites. Keeps well when cut. \$1.00.

D64. MILLIONAIRE. Very large. \$1.00.

Special Offer—Any 6 Dollar Dahlias for \$5.00, Prepaid

LONG'S Finest Fifty-Cent Dahlias for 1924**SWEET
HEART'S
BOUQUET**

D36. Another famous dahlia, "Made in Colorado" by my good friend Wilmore, the oldest dahlia specialist in America.

Introduced in 1920, selling for several years at \$2.00 each, but offered for the first time now at only 50 cents for good strong tuber.

Color, unique shading of salmon-rose, tinged with fawn; is pleasing alike in both day and artificial light.

A perfect flower of the popular peony type, much larger than this illustration; stems extra long and wiry, holding the flowers up well. One of the earliest to bloom, and continues throughout the season.

Sweetheart's Bouquet delighted all who saw it in my gardens, and was almost always included in bouquets selected by customers. I anticipate a landslide for this variety, now that the price has been reduced to only 50c. Would suggest that you order early.

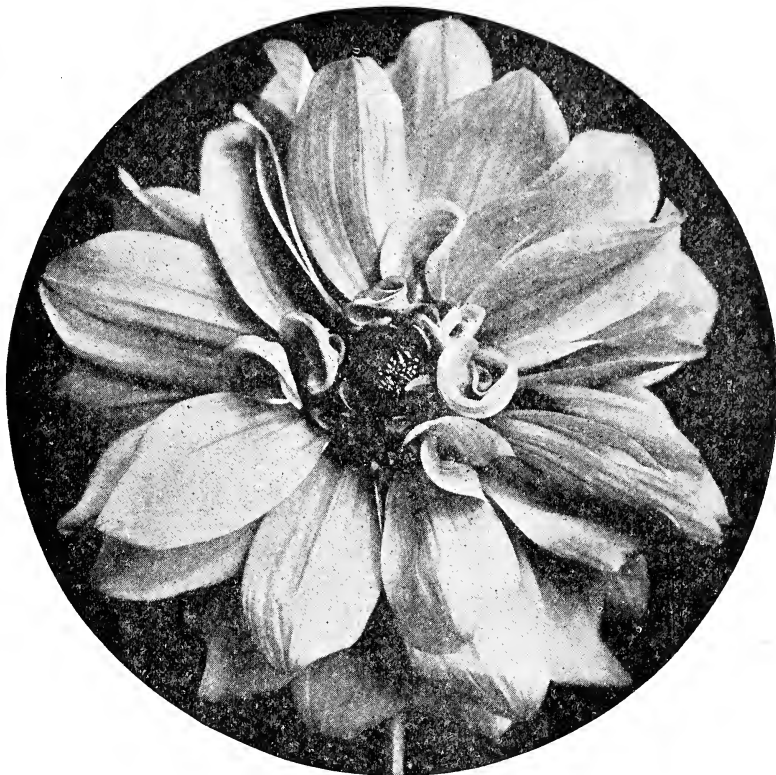
D16. GOLDEN WEST. (Cactus.) Golden yellow or burnt orange, shading to clear yellow in center. Good stiff stems and good keeper when cut. One of the finest Cactus dahlias I know of, regardless of price. Hardly ever have enough, but think can supply all this season. 50c.

D19. CHIPETA. (Cactus.) Rich Amaranth-red. Flowers large and held erect on long stems. Different from any other Cactus I have seen. Should be in every collection. 50c.

D21. NAIAD. (Peony.) A beautiful tinted cream-pink flower, resembling a water lily. Stems long and wiry. Grand under artificial light. Praise from visitors in my gardens stood about 50-50 between Naiad and Sweetheart's Bouquet. The two caught the eye of everyone. Former price \$1.00. Reduced to 50c for 1924.

D26. F. W. SCHIEFF. (Dec.) Golden bronze, shaded to orange. An immense, and very attractive flower, borne on extra long, strong stem. 50c.

D27. LAURA BARNES. (Peony.) Another outstanding "Made in Colorado" dahlia. Introduced several years ago by Wilmore at \$3.00 each. That's what I paid for my first supply. Color clear orange-red. 50c.



D28. SOUTH POLE. (Peony.) Pure snowy white. Very large and fluffy. 50c.

D31. GERO'S PINK. (Show.) Rich deep pink. Petals beautifully quilled. Larger than the well known Lavoni. 50c.

D62. PRIDE OF CALIFORNIA. Originated in California. Would have to be a hummer, else the "Native Sons" of California would run the introducer out of the state. I wot! Fortunately, California may well take pride in this extra large red dahlia that stands up well both on the plant and as a cut flower. Formerly in the dollar class. Reduced to 50c for 1924.

(Decorative type, as illustrated at top of page 35, but of course very much larger. It is the size as well as color of this variety that makes Californians swell with pride!)

D70. FRANCIS DANIELS. (Peony.) Delicate shade of light pink. A lovely dahlia with exceptionally long stems that hold the flower erect. Excellent keeper. Should have rich soil for best results. 50c.

D72. F. W. FELLOWS. (Cactus.) This beautiful orange cactus is one of the best grown. Blooms are very large, and of perfect form for exhibition. Its color is most attractive. One of the best for cutting. 50c.

D74. ARVADA. (Peony.) Pleasing shade of old rose, shading to fawn-pink. A remarkably free bloomer, producing its well-formed flowers on good stems. 50c.

Special—Any 7 Fifty-Cent Dahlias for \$3.00, Prepaid

New Dahlias from Seed

New Dahlias all come from seed. Dahlia tubers come true and do not mix, but seed will produce various types and colors, probably all different from the kind that supplied the seed. There seems to be no law or rule governing this. They seem to come just as they please. That's what makes it interesting and also gives the amateur a chance to originate new dahlias of merit.

Where space is limited, it is desirable to plant tubers of a few real good kinds. But if one has more room, then it is indeed worth while to grow some from seed also. Not all from seed will be prize winners, so the usual method is to grow quite a number, then in the fall select your favorites, saving the tubers for next year.

This is the method followed by dahlia specialists. They grow hundreds and thousands from seed, then select only a few that show unusual merit. These are saved, named, and stock increased until enough on hand to offer at fancy prices. You, too, can name your own new dahlias. Some name them for

members of their families, or friends. Splendid idea.

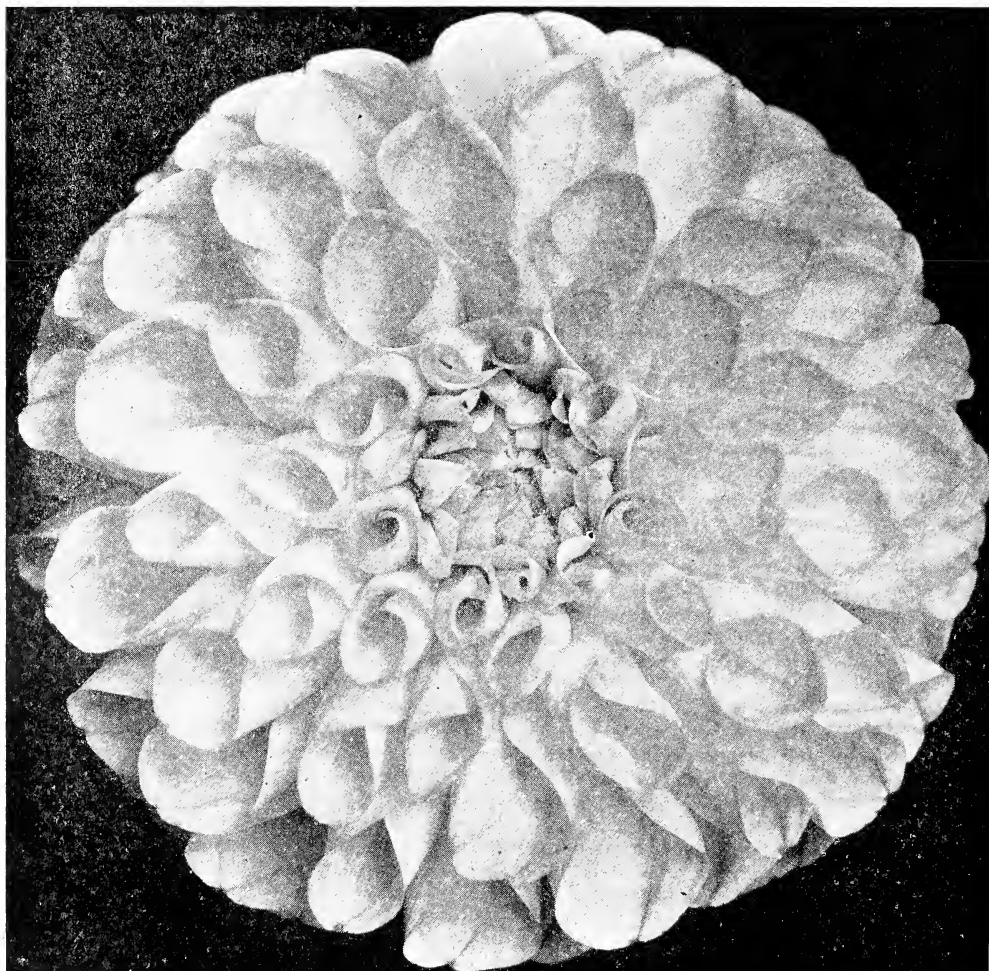
As there are no two people just alike, so there are peculiarities and individualities that make these dahlias of yours, grown from seed, different from others. This adds much interest to growing dahlias from seed.

Sow the seed out in the garden after ground warms up or start indoors and transplant. Protect plants from frosts. Dahlias from seed will nearly all blossom even from outdoor planting, and almost as soon as those from tubers.

Long's Special Mixture. A good mixture, same as I've offered for several years. Will produce many fine flowers, and some grand new ones well worth saving and naming. Pkt., 25c; 5 pkts., \$1.00.

Long's Professional Mixture. Seed saved from only the newer and finer, expensive varieties. Should produce a larger percent of extra fine kinds, though we never can tell. Same as I myself shall use, hoping to get a few rare beauties. Pkt., \$1.00.

Note. Dahlias from seed come mostly semi-double or peony flowered, the most popular type.



D17—Mammoth White Snow Dahlia, "Dee-Lighted"—30c

LONG'S SUPERB IRIS



"The exquisite beauty of the Iris, with its soft and iridescent coloring is rivaled only by the orchid," so the saying goes. But I would add,—and the gladiolus." The iris comes and goes before the gladiolus appears, so there is no rivalry.

Iris for Decoration Day. In most localities, and most seasons, the iris can be depended on for cutting May 30th. Some varieties earlier than others, so it's a good plan to set out a number of varieties to be practically sure of having flowers for Decoration Day.

For several years I've been overhauling and improving my iris collection, discarding many varieties, and adding some splendid new ones, though retaining a few of the well known favorites, which are hard to beat at any price. Having now ample stocks in my own garden of each variety listed herewith, I'm making reasonable prices on them. Iris prices are for divisions, as usually sold.

Iris Collections Specially Priced

Collection "A." One each of Nos. 1, 3, 7, 11, 13, 21, 31. Each kind labeled. Total value \$1.30. Special price for assortment only 99c.

Collection "B." One each Nos. 2, 11, 12, 13, 25, 27, 36. Each labeled. Total value \$2.20. Special price for the assortment only \$1.77.

Collection "C." One each Nos. 9, 11, 13, 17, 21, 23, 25, 27, 36. Each labeled. Total value \$2.50. Special price for the assortment only \$1.98.

Lost Label Iris

All worth 15c to 25c each, but labels lost, so cannot be sold except as mixed; no certain colors promised, as not labeled. Doz., 90c.

Extra Iris Roots Free

With every iris order, amounting to \$1.00 or over, (at single root prices), we will put in extra roots, the larger the order the more extras, which amounts to the same as a liberal discount.

Note this: The iris blossom is tripartite. Three portions droop. These are called the **falls**. Three stand erect, their tips meeting. These are called the **standards**. Often the two sets are of different colors, shadings or markings. In describing iris blossoms "S" means standards, "F" means falls.

1. Albicans. Splendid early pure white. Same season as Kochi, and combines splendidly with it. 15c; doz., \$1.30.

2. Caterina. (New.) S. clear blue; F. soft lilac. A fine new hybrid. Flowers very large, on stout branching stems. 40c; doz., \$4.00.

3. Kochi. Both S. and F., rich velvety purple. Early. 15c; doz., \$1.40.

5. Eldorado. S. bronze, shaded yellow; F. violet-purple, touched at sides with bronze-yellow. Unique color combination. 25c; doz., \$2.20.

7. Flavescens. Delicate shade of soft yellow; large and sweet scented; fine for massing. 15c; doz., \$1.30.

9. Florentina. White, very faintly tinted lavender; fragrant; early, and, like Albicans, combines well with Kochi. 15c; doz., \$1.40.

11. Her Majesty. S. lovely rose-pink; F. deeper, tinged crimson; the general effect is that of pink, a rare color in iris. Should be in every collection. 25c; doz., \$2.20.

12. Isolene. (New.) S. lovely rose-pink; F. purplish old rose with golden throat. Very handsome. 40c; doz., \$4.00.

13. Jaquesiana. S. bright coppery-brown; F. rich maroon. Unique in its striking combination, yet harmonious blending of colors. 30c; doz., \$3.00.

15. Juniata. Similar to Pallida Dalmatica, but darker. 30c; doz., \$3.00.

17. King of Iris. S. old gold; F. rich maroon, edged with gold. Flower large, and one of the most brilliant. Well named "King of Iris." 40c; doz., \$3.80.

21. Madam Chereau. White, elegantly frilled with a wide border of lobelia blue. One of the best, though inexpensive. 15c; doz., \$1.30.

23. Montezuma. S. deep gold, minutely dotted brown; F. yellow and white, veined purple, and dotted brown; unique. 40c; doz., \$3.80.

25. Mrs. Newbronner. Deep golden yellow. Considered by many the best rich yellow. 25c; doz., \$2.40.

27. Pallida Dalmatica. A giant among iris. S. fine lavender; F. clear, deep lavender; plant tall and robust; flowers large and lasting and delightfully fragrant; superb for garden display and wonderful when cut for bouquets. Special price. 20c; doz., \$2.00.

31. Rigolette. S. and F. rich maroon, shaded yellow. Very showy; free bloomer. 15c; doz., \$1.30.

36. Twilight. (New.) S. and F. delicate violet-purple, devoid of markings. Large flowers on long stems. 40c; doz., \$4.00.

Iris Culture, see page 62.

LONG'S Glorious Gladioli For 1924

Splendid Named Varieties

Some well-known varieties have been dropped to make room for newer ones of unusual merit. Many deserve half a column space, but have been limited to a few lines. Bulbs run from about an inch up. All are strong blooming sizes.

6 at doz. rate. 50 at 100 rate. For price per 100 multiply the dozen price by 7. All prepaid.

Nearly All Prices Reduced

AMERICA. Discontinued. Plant L. M. Foch instead. Much better.

G2. ALICE TIPLADY. New. (Primulinus Hybrid.) Most unusual and charming orange-saffron color. Each, 15c; doz., \$1.50.

G6. BARON J. HULOT. Dark blue with light markings. Each, 12c; doz., \$1.20.

G10. E. J. SHAYLOR. New. Pure, deep rose-pink, charmingly ruffled. Very tall, strong grower, blooming even from very small bulbs. 12c; doz., \$1.20.

G12. EVELYN KIRTLAND. Rose-pink, fading to shell-pink at center, with brilliant scarlet blotches on lower petals. Very tall. One of the best yet. Each, 12c; doz., \$1.20.

G14. FARIE. Dainty pink, blending into cream throat. Each, 15c; doz., \$1.50.

G16. FLORA. A new yellow from Holland that rivals Golden Measure, though not quite so large, and not so deep yellow. Mighty fine, though, and costs much less. Each, 15c; doz., \$1.50.

G18. GOLDEN MEASURE. Largest, deep yellow. Special low price, 33c; doz., \$3.30.

G20. GRETCHEN ZANG. Soft, melting pink, blending into scarlet on lower petals. Each, 12c; doz., \$1.20.

HALLEY. Discontinued. Plant Prince of Wales. Much better.

G22. HERADA. Deep lilac or mauve. Each, 12c; doz., \$1.20.

G24. LE MARECHAL FOCH. Another wonderful Holland variety. Beautiful light pink, similar to America, but earlier; flowers much larger. Each, 10c; doz., \$1.00.

G26. LILYWHITE. An extra early pure white (sometimes slightly tinged lavender-pink but usually snow white). Each, 8c; doz., 80c.

G28. L'IMMACULEE. A new Holland variety of great merit. Pure white without tint or marking. Each, 15c; doz., \$1.50.

G30. LOUISE. Large bright blue-lavender with wine colored blotch. Each, 25c; doz., \$2.50.

G32. LOVELINESS. Well-named; cream, with darker markings; very large. Each, 14c; doz., \$1.40.

G34. MRS. F. KING. Not new, but still makes the new ones go some. Light scarlet; spike tall and straight with many large, wide open blossoms. Each, 5c; doz., 50c.

G38. MRS. DR. NORTON. Soft pink with yellow throat; large. Each, 20c; doz., \$2.00.

G40. MRS. FRANK PENDLETON. Light pink with dark red blotch in throat; flowers very large and fine; one of the very best, regardless of price. Each, 10c; doz., \$1.00.



G46. PRINCE OF WALES. It's a dream! Similar to the well-known Halley, and as early, but much finer; large salmon-pink, with primrose throat; indeed lovely; fast displacing Halley. Each, 12c; doz., \$1.20.

G48. PURPLE GLORY. New. Deep velvety maroon-red, with almost black blotches; very tall spike; flowers large and ruffled. Each, 70c; doz., \$7.00.

G50. RUFFLED GLORY. Pinkish cream; crimson stripe on each petal. 12c; doz., \$1.20.

G54. ROANOKE. (Primulinus.) One of the largest of this class; light yellow. Each, 9c; doz., 90c.

G62. WAR. Large dark red; spike tall and straight; strong grower; fine. Each, 10c; doz., \$1.00.

Some Fine New Glads

G73. CARMEN SYLVA. New. Splendid pure white. Each, 25c; doz., \$2.50.

G76. GOLD. Pure golden yellow; throat a shade deeper, slightly dotted and streaked. Each, 80c.

G80. JENNY LIND. Pure, soft apricot-pink; throat pale yellow, the colors beautifully blending. Each, 60c.

G82. MARY PICKFORD. Delicate creamy-white; throat sulphur-yellow. Each, 15c; doz., \$1.50.

G86. MRS. F. C. PEIERS. Lavender, with wine colored throat. Each, 60c; doz., \$6.00.

G88. W. H. PHIPPS. Flesh-pink, overlaid with light rose-salmon. The greatest of Dieners' productions, and considered by many as the finest glad to date. 15 or more immense blossoms open at one time. Each, \$12.00.

G90. PINK WONDER. Medium pink shading to yellow on lower petals, overlaid with rose featherings. Blossoms very large. Each, 30c; doz., \$3.00.

G92. RICHARD DIENER. Rose-salmon; light sprinkling of ruby on creamy center. Each, \$3.00.

G100. WHITE WONDER. Large, tall, white. Each, 30c; doz., \$3.00.

G102. J. A. CARBONE. Orange-salmon; yellow center. Very large. One of Diener's very greatest productions. Each, \$12.00.

G106. SOUVENIR. A new Prim type from Holland that has taken glad fans by storm. Not large, but the color is the best yellow to date. At least many claim it is. Each, 25c.

G110. CRIMSON GLOW. Deep, velvety, glowing red. Much earlier than War. Extra fine. Each, 18c; doz., \$1.80.

G111. ORANGE BRILLIANT. Small flowered Prim, but color very unusual. Brilliant orange, as named. Each, 10c; doz., \$1.00.

G112. MARIE KUNDERD. Considered best white to date. Large and finely ruffled. Each, \$1.00.

G112½. Half size bulb of Marie Kunderd for 50c. Will bloom nicely.

Extra Glad Bulbs Free

With all good sized glad orders we will include extra bulbs free, the larger the order, the more free bulbs.



THE BIG FOUR! Le Marechal Foch, Everett Curtis Long, Elizabeth Curtis Long—and Elizabeth's doll!

Long's Sunshine Glad Mixture

Contains a nice variety of colors, made up from good named sorts, but not labeled. Bulbs all good flowering sizes, but do not average so large as those in the Exhibition Mix. A good honest mixture that will give a lot of pleasure for the price. Doz., 50c; 30 for \$1.00; 100 for \$3.00.

Long's Exhibition Glad Mixture

Something fine. Unlabeled bulbs, of our selection, including some of the old favorites, and a number of the newer and high-priced kinds. Many bulbs in the mixture will produce 2 or 3 flower spikes, and as many new bulbs as spikes. This is intended for those who wish something real good, yet do not care to bother picking out certain named varieties and keeping them labeled. Also the price is less than would be if all were kept separate and sent out labeled. Doz., 80c; 25 for \$1.50; 100 for \$5.00.

Gladiolus Bulblets

These are the small hard shelled kind, about the size of a grain of pop corn. They make small bulbs that bloom the following year. Directions for germinating and growing printed on each packet. Quantity of bulblets varies much, according to the variety. Not less than 25 bulblets in a packet.

All Bulblets at 25c per Packet

Bulblets of the following kinds only: America; Shaylor; Kirtland; Foch; Lilywhite; King; Pendleton; Peace; Roanoke; Sunshine Mixture.

(Sunshine Mix, \$1.00 per 1,000.)

How to Grow Glads—Page 55



100 Pansy Plants \$2 Prepaid

Long's Super-Giants, mixed colors. Well rooted, 1cc proof plants, wintered out doors. Best size for setting out. (40 plants \$1.) Will bloom in 10 to 20 days.

J. D. LONG, Seedsman, Boulder, Colorado

LONG'S Double Peonies

Avalanche. White with cream center. Fine. A comparatively new variety, very popular with peony fans. 90c.

Couronne d' Or. Large crystal white semi-rose type, with carmine flecks, having a ring of yellow stamens around the center, hence its name, "Crown of Gold." 60c.

Edulis Superba. The earliest good large pink. Fragrant. 50c.

Felix Crousse. A brilliant, dazzling, ruby-red mid-season variety; strong grower. 75c.

Festiva Maxima. Large, pure white, with red flecks in crown. 50c.

Grover Cleveland. Brilliant, bright crimson, exceptionally showy. Free bloomer. Superb variety. \$1.50.

Monsieur Jules Elie. Glossy flesh pink, shading to deeper rose at base, the entire bloom covered with a silvery sheen. Large flower, strong stem. Very fine. \$1.00.

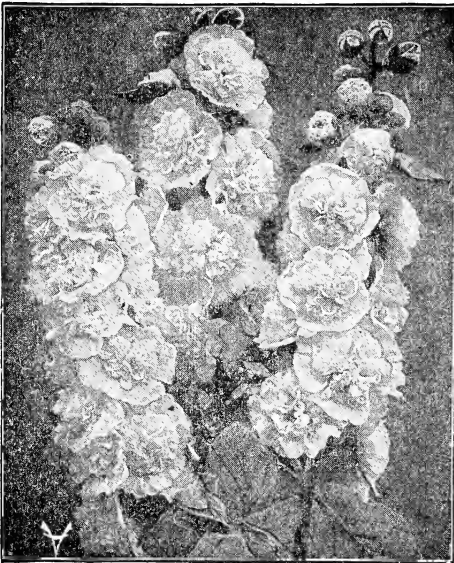
Officinalis Rubra. The deep bright red peony of the old-time garden. Earliest of all good peonies. Almost always in bloom for Decoration Day. Larger roots than we sold for less last fall. \$1.00.



NOTE: Peonies start growth early in spring. If order received too late for spring it will be filled next fall, unless you request cancellation and refund instead.

Prices are for good strong divisions. 2 eyes or more. The size that I usually plant. See Peony Pointers, page 62.

LONG'S Rose-Flowered Double Hollyhocks



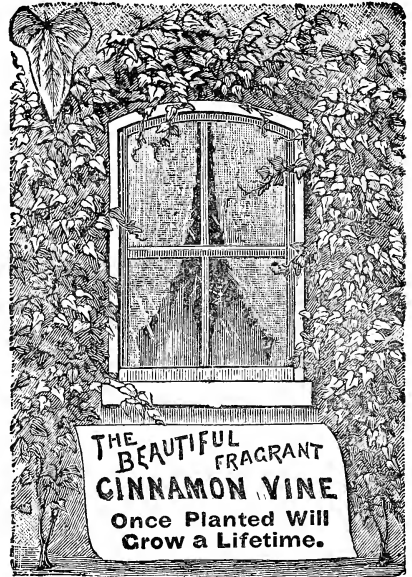
Their double blossoms rival the rose in exquisite color and form.

These hollyhocks bloom second year from seed. I offer year-old roots that will bloom this season. Plant early for best results. Colors: Red, White, Yellow and Newport Pink. 3 roots for 50c; 8 for \$1.00; each color labeled. Mixed colors, our selection, not labeled, 12 for \$1.00. All prepaid. Seed, any color or mixed, pkt., 10c.

"Colorado Sunset" Hollyhock

Double or rose-flowered; color varies, usually salmon or copper tinted on yellow. Pkt., 25c. No roots this year.

Cinnamon Vine Roots



Hardy, rapid-growing climber, covered with beautiful glossy heart-shaped leaves and a profusion of sweet scented flowers, perfuming the air for a long distance.

Once planted will grow a lifetime. Perfectly hardy, thriving on all soils in sun or shade, wet or dry, doing best in sun and rich soil. No insects or blight trouble this vine; freezing does not harm it. Plant early in April to middle of June, 6 to 8 inches apart. Lay roots flat; cover about 2 inches. Protect by mulching the first winter. Vine dies down each fall, starting again in spring. As the larger roots make the most rapid growth, I offer one size only—**specially selected strong roots.** 2 for 25c; doz., \$1.25; prepaid.

LONG'S New Double Hollyhock, "Colorado Sunset"

Or, I might call this **LONG'S Improved Sunset**, for it is the result of my selecting and re-selecting from the lovely variety I've grown for four years under the name, Sunset.

The original stock of Colorado Sunset was found in a row of mixed double hollyhocks by a gardener not far from the foot of Lookout Mountain, west of Denver. I was fortunate in getting some of this stock, and have improved it, as explained. The color now runs deeper and richer. Blooms second year from seed. The plants live, increase in size, and continue to bloom freely for several years.

If you've enjoyed some of our glorious Colorado sunsets, as seen from Boulder or anywhere along the eastern foothills of the Rockies, you will get a mental picture of this entrancing color without much elaboration on my part.

But how shall I describe it, with mere words! The general color is that of salmon-

apricot, but it varies from this to bronze or copper and sometimes runs lighter than any of these. Several shades may greet you from a single plant. Then again, the color changes from day to day after the blossoms have fully opened, just as a sunset will change, the tendency being to a lighter shade as the blossom grows older.

Do not confuse this with a variety sometimes offered as salmon-colored. This is not the same, to the best of my knowledge, for I have seen them growing side by side. No roots of Colorado Sunset for sale this season, as I need all I have for growing a new supply of seed. Price for seed: Pkt., 25c; ¼ oz., \$1.00.

Note: Some of the plants in my lot of mixed hollyhock roots offered on opposite page, at 12 for \$1.00, may be very similar to Colorado Sunset, as are from seed gathered from plants that did not come near enough to the color I have tried to get in the "Improved Sunset" or Colorado Sunset.

Some First Aids for Saving Your Garden

Real Success With Your House Plants



Sent complete with two extra bulbs for

\$1.25

Postpaid

THE THING LONG NEEDED

Just what mother was long looking for.

Spraying Under the Leaves

Little Lenox Sprayer

A handy sprayer, always ready, for use on house plants, small shrubs, rose bushes, etc. Throws spray 6 feet or less, according to pressure of hand. A fine spray may be thrown under, over, or upon the foliage removing dust and destroying insects. Fine for newly sown seeds, also for sprinkling clothes. A small cake of tobacco soap comes with the sprayer, but a larger cake should be ordered also, to have on hand when needed.

A Good Sprayer

No. 25-D is so constructed that it operates continuously on both the up and down stroke and throws a fine misty spray. Will handle all the usual solutions and is fine for rose bushes, poultry houses, etc., as well as for general garden use.

Galvanized reservoir; spray caps are made of brass, and other parts durable tin. Built for service. Capacity, one quart. Price, \$1.35, prepaid.

"You should see my onion bed. I don't think there was a bad seed in the packet. I often tell my friends about Long's seeds."—Mrs. A. J. Sitz, Vernovia, Oregon.

Sulpho Tobacco Soap

Much used for spraying roses, sweet peas and many other plants. Is a contact spray for lice. 3-oz. cake, 10c; 8-oz. cake, 25c; with directions. Add 5 cents to either size for mailing. Better get the 8-oz. size.

"Black Leaf 40"

Get this through your local druggist if you can, as it is not mailable and express is so excessive on so small a package. I can supply, however, at: Oz., 25c; ½ lb., \$1.00; not prepaid.

Arsenate of Lead

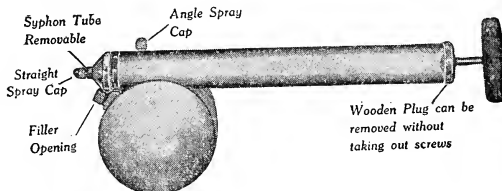
This, also Paris green, can most likely be bought from your local dealer to best advantage, as both not mailable.

Tobacco Dust

Scatters and drives away bugs on melons, cucumber, etc. Good idea to have this on hand. 2 lbs., 35c; 8 lbs., \$1.00; prepaid within 4th zone.

Flower City Plant Food

Concentrated fertilizer or plant food especially recommended for house plants. Package, 25c. Add 5 cents if sent by mail.



Sprayer No. 25-D. Price \$1.35, Prepaid.

"I'm only an amateur but have such fine luck with your bulbs that I want more. You surely do as you advertise."—John G. Car-gill, Milwaukee, Wis.

LONG'S SHORT TALKS

Happy New Year! I'm writing this January 2nd.

I made a resolution yesterday. And haven't broken it yet. Resolved that this year, 1924, I'm going to do my Christmas shopping early.

You folks who think you have such a task doing your Christmas shopping ought to have a good sized seed catalogue to get out right during the Holiday season.

Last year—it doesn't seem so long ago, but it really was last year—I mailed some of my packages so late they didn't arrive until after Christmas. And some others, as well as a lot of greeting cards, I never did mail. To be honest, I never even bought 'em!

But government reports show that other folks are improving from year to year in the matter of shopping and mailing packages early during the Holiday season. And everybody is better off for this. We get better service, and kill off fewer clerks and postoffice employees. And when the Big Day arrives we have our presents in hand.

What rejoicing there would be among seedsmen and their helpers if this same bunch of early Holiday shoppers would speed up placing their seed orders. If a lot of you who order in March would send us even part of your orders early in February it would mean better and prompter service to all, and cheer up everyone at our end of the line just wonderfully.

Frankly, I'm about the last man who can consistently urge you to do this, for I myself belong in the class that put off Christmas shopping until just about "The Night Before Christmas," and I suppose I'd do the same about ordering seeds. I meant to say that I used to put off this shopping, but this year I'm doing a whole lot better—honest, I am. Why, just today I bought a nice ribbon for my typewriter. No, no, it wasn't a hair ribbon—just a narrow black ribbon about half an inch wide and half a mile long.

As the preacher said—or is said to have said—don't do as I do but as I tell you to do, and you will do right. Run through this catalogue right soon after you get it and send us part of your seed order anyhow. Include bulbs and plants if you wish, but they may be sent for later, if you prefer. But some of the seeds you will want in a hurry when spring does spring suddenly. All seeds will keep, so you might as well have them on hand. But get at least those you need for early planting.

However, for goodness sake, don't get the idea that we do not welcome with open arms all orders no matter when they come. And we want a lot of orders after the Big Rush as well as before. The rush season depends on the weather. Usually it comes in March, but last year spring started out all right but later on, like Spark Plug, it ran the other way, back towards winter, so that our heaviest business came early in April. But we gave sudden service, and can do it again if we get enough early orders to prevent the congestion later on.

"Books That Have Helped Me"

Once in a while we run across a self-made man, but most of us have been helped along in one way or another.

I often think it would be great to make a whaling big success in life, just for the fun of being interviewed and given a chance to tell the rising generation the secret of my success, entitled, perhaps, "HOW I DONE IT."

Without waiting for that day to arrive I'm going to tell you of some things that have helped me wonderfully thus far, and on which I still rely to cheer and comfort me, and make it possible for me to carry on.

I said I'd tell you some things. Another time I may tell more, but just now I shall refer mainly to books. I can't say "books I have read," for I've never read these books clear through. In fact, all I ever get is just a peep at a page or two in each book.

But you have no idea how these few pages delight and encourage me. They are all written by my favorite authors. These authors are my customers and the pages I am permitted to read and enjoy are from their own books—their check books, if you please!

These noble check books have, as I say, encouraged and supported me, and enabled me to pull through many a hard place. The chances are that you who may read this are one of my favorite authors. Or, you may in due time be added to my list of delightfully entertaining authors. Believe me, I appreciate these little glimpses into your books. May you live long and keep on writing!

"I See by the Papers"

That Mr. and Mrs. Ben Glaze, down at Fowler, Colorado, had a wonderful flower garden last summer. It was one of the brightest spots in the great Arkansas Valley, 'tis said. Sure, they plant Long's Tried and True seeds. They send me six or eight orders every season.

That the gladiolus, E. J. Shaylor, made a great hit on the Denver cut flower market last summer. It is unusually early for so large and fine a variety.

That a good many florists and other flower lovers in Kansas City, Mo., favor making the iris the official flower for their beautiful city. And just the other day I read a suggestion that the iris be made our national flower, for the reason the iris thrives and blooms practically everywhere that flowers can be grown, having little competition in this respect. Each year some extra fine new varieties of iris are introduced, making the growing of this popular flower most interesting and fascinating.

That Mrs. E. W. Scudder, one of my best Kansas customers, at Winfield, Kansas, is creating great interest in the gladiolus in that section of Kansas. She now has something like 200 varieties in her collection. I recall that about a year ago Mr. Scudder sent me an order for \$25.00 worth of glads, saying they were to be a Christmas surprise for Mrs. Scudder. And just a few weeks ago he bought a lot more of my finest varieties. Nothing nicer for a hobby for the whole family than a collection of glads.

That a good many of my customers won blue ribbons at county fairs last fall.

That Mrs. E. N. E. tells in the January, 1924, AMERICAN MAGAZINE (page 150) "How We Came Back After Hard Luck Knocked Us Down." Being a seedsman, I naturally noticed the importance she gave to way their garden helped them to "Come Back," both financially and physically. She says: " * * * By this time we were getting such good results from the garden that, by canning the surplus, table expenses were reduced the year round." That's just what I've been preaching for years, but you'd better read the article in the AMERICAN for yourself. It may have more weight than if I, a seedsman who wants to sell seeds, keep talking about how your garden will help cut the cost of living.

More About Those Zinnias

No flower has gained in popularity faster than the zinnia, the past few years. This because most wonderful improvements have been made in size and colors of this old-time favorite. Just imagine great big, gorgeous blossoms 5, 6 and even 7 inches in diameter!

And, mind you, these from seed sown right out in the garden, requiring very little care. They want sunshine, very rich soil and plenty of water, with just ordinary cultivation from time to time. What's more, they begin to bloom in about 60 days from time of sowing the seed outdoors.

Don't think you have to fuss with them, starting indoors. And you don't need to buy plants. They do best if allowed to grow right where the seed is dropped in the row or bed, though do transplant easily.

I find that many make the mistake of planting too early. Wait until ground is warm, and until about a week before the usual time for your latest spring frost. Too early and too deep sowings are not likely to grow. I sow here any time from about May 10th to last of June.

And don't have the plants too close together. A foot apart in the row is plenty close, with rows several feet apart. If too thick in the row the plants will stretch up very tall, like Andy Gump, but blossoms will not be so large as when each plant is given more room.

Both the Colossal and Dahlia-Flowered zinnias are immense, the latter being still larger than the wonderful Colossal. Separate colors do not yet come all true. You are likely to get a sprinkling of other colors, no matter what color you plant. They can be pulled out, of course. Often these sports are of unusually attractive colors.

Lady Buys Pound Zinnia Seed

We sure do sell a lot of zinnia seed, and many orders run large. But the largest order we got was just before Christmas. A good customer down at Goodland, Kansas, bought a lot of our zinnia seed last spring. It seems that they made such a wonderful showing that many of her friends were anxious to have some next summer. So this lady sent for a whole pound—half pound each the Colossal and Dahlia-Flowered—saying she was going to give it all away to her friends for Christmas presents. That's another solution of the Christmas problem, and a good one, too. A pound of zinnia seed is a whaling lot, for it is so light. Will sure make a great bright spot for miles and miles around the town of Goodland. "What's the matter with Kansas?" Nuthin'.

Maybe I'm Too Modest!

For years it has been my policy to give good measure, heaped and running over, so far as possible, when filling orders. If you order a dozen plants or bulbs you are most likely to get 13—maybe 14. Always like to throw in something extra for luck and in appreciation of your patronage and good will.

Each year I plan to have several items, that I do not list in catalogue, just to give away, to those who send us orders of a dollar or larger. And often, too, we slip in some extras besides—the larger the order the more extras. For instance, if your order calls for sweet peas in named varieties we are apt to send you an extra packet of something I think is extra good and will please you. In putting up an order for 100 glad bulbs of either Sunshine or Exhibition mixed, the clerks understand they are to

drop in an extra handful after the 100 are counted out.

The extras we send, in addition to liberal count, are always items of our own selection, for we plan ahead to send certain things and have extra stocks of them provided.

All my regular customers understand this liberal policy, and have shown their appreciation of it. Some say it's just like getting a Christmas package from home to open up an order from the J. D. Long Seed Company.

I've never said much about this in my catalogues, and it occurs to me that maybe I should mention it as I'm now doing, so those who have never dealt with us would understand we have a little treat in store for you.

Somehow or other I never warmed up to the idea of offering premiums, such as jewelry, hog ollers, lip sticks, flivvers or left-handed hair brushes, in order to induce my readers to buy honest to goodness seeds. But after the sale is made I do like to show our appreciation by filling the order liberally. Of course we can't do a great deal for an order of just a dollar or so, but have something lined up for even that small an order. Anyhow, why not take a "Long" chance and see what you'll discover. Columbus took a chance—and just see what he found!

Reward for Early Orders

I always feel that the customers who sit down right soon after receiving the catalogue and make out their orders, or at least send for the seeds they will need early, deserve a little special reward. Here's hoping a lot of you will send us your orders early in February, or even the last of January. Fine! Thank you very much.

Farmers' Faith

"I do not know of any individual who exhibits more faith than the farmer.

"We city people do not realize this until we get out into the country.

"In considering the farmer, bear in mind that he spends approximately eight months raising a crop, for which he generally does not have a single order until he has harvested it and that he does not know what the price will be at which he must sell it.

"In other words, in early spring, the farmer says, 'I will plow and fertilize this field; I will plant it with grain; I will cultivate it and if the weather is favorable, I will have a good yield by the end of summer. Then I will harvest my crop and I will offer it on the market. I hope the price will be high enough to repay me for all my labor.'

"How many of us in the city would care to operate on that basis?

"As salesmen and advertisers, we grow discouraged if we do not see tangible results from our efforts each day.

"The farmer's labor of a whole season may be dissipated by a few days of unfavorable weather just previous to or during the harvest.

"Yet there are millions of farmers in this country who are following the plow year after year.

"Should not we in the cities buck up?"

—The Jayhawk.

"From seed I bought of you I had the largest dahlia plants and blossoms and they attracted much attention when it was learned they were grown from seed."—Joe Wesley, Pueblo, Colo.

"Let George Do It"—For \$1.00.

S'posin', jest s'posin', you are rich (if really rich, then cut out the s'posin') but do not belong to the idle rich fraternity. You prefer to plug right along filling a man's place in the world and enjoying the blessing of work.

And yet you want to keep in touch with what is going on in the world. You can't spare the time to wade through the detailed and often inaccurate newspaper reports from day to day and winnow the wheat from the chaff, though you give the dailies the once over, of course.

You get an idea. You insert a Want Ad. You offer steady employment to a wide-awake man for performing certain work, to be explained in detail in a personal interview with the applicant.

Like Opportunity, an applicant knocks at your door. Says his name is George.

You say: "Getting right down to brass tacks, George, I'm a busy man. I want someone to read all the worth-while newspapers and magazines for me, and glean the important information, boil it down, classify it, put it in type that is easy to read, and hand me these findings every week-end."

"Thus I can devote more of my own time to work and pleasure. Yet I can improve my mind and keep abreast of the times. I must know what's going on—not only in our own country, but in all countries of the world—in matters of government, science, invention, education, religion, etc., etc. I want to know what's what in new books."

"And say, George, I do enjoy a good joke, but there are so many flat and flabby, half-baked, pointless, off color so-called jokes published that I hate to spend time running down the good ones. I want the best real humor included with this weekly report. And a good story might be added also. By the way, my wife feels as I do about this efficiency plan, and wants a page or two each week that will be of special interest to women."

"If all this could be assembled and condensed, as I've suggested, and be doped out in such a manner that the kiddies would find a good bit of it interesting and instructive, then I think the plan would be just about perfect. It would fill the bill for the whole family. Maybe a few drawings and pictures could be worked in to add interest and make things clear at a glance."

"Now then, George, I realize that this is taking in a lot of territory. It's a big order. But I have the dough to foot the bill, if I can find someone who is able to deliver the goods. Are you the man?"

George modestly replies: "Yes, I'm the man. And the cost will not be prohibitive. However, what you ask is not a one man job. All this will require a big office force. But, fortunately, I have that force at my command. I anticipated your wishes, and have everything lined up to deliver the goods, and can begin immediately."

Just as a Safety-First measure, you want to know at this point where you get off in the matter of paying for all this organized service. You ask George to state his terms.

To your amazement, George says this will cost you just one dollar a year. If you don't faint dead away, you will want to know how cum.

Says George: "Briefly, my name is really George all right—George D. Mitchell, member of the Pathfinder Publishing Company, of Washington, D. C. As luck would have it, I happened to be in this vicinity when your ad appeared, so dropped in to explain that associated with me is a big force of office people. We specialize in just the work

you have outlined. We send out these reports, as you call them, in the form of a weekly magazine, THE PATHFINDER, so called because it shows the way through the jungle of events and gives you the gist of the world's news in a nutshell.

"The reason we can give you this amazing service for only one dollar a year is that we are serving over half a million other families in the same way."

"Our magazine comes to you in clean, respectable working clothes. As much as possible of your dollar goes for real work and service. You will be delighted to see how everything is condensed, classified, yet interestingly told. When this magazine arrives you will have to hurry if you beat the wife and kiddies to it. It's for the whole family. I'm told that some families scrap over who shall read it first."

"There's no red tape about getting this service installed in your home. Simply send your name and address, with one dollar, to The Pathfinder Publishing Company, Washington, D. C., and we will do the rest. Yes, I mean it will come to you every week, costing you less than 2 cents a week. Some service, I'll say! If what I've told you sounds too good to be true, just ask that man J. D. Long of Boulder, Colorado. He has had this service for several years and thinks it's great."

Grow Your Christmas Presents

Why not stop running around in circles, going through the same spasm every Holiday season trying to think of something new or different to give for Christmas?

Provided those you wish to please have gardens, why not do this: Grow some nice gladiolus bulbs in your own garden this next summer. Take them up next fall, let them cure until early December, then clean them up nice by removing the old, original bulbs.

If you have grown for this purpose some of the named varieties then write the names plainly on small paper bags or on sheets of paper in which you wrap each kind separately. Pack these in a holly box and fix it up as nice as you wish. That's a present that will especially please because you, with Nature's help, made these bulbs yourself. If mixed varieties are used, the extra labeling and wrapping may be dispensed with.

To be sure, you could buy the bulbs from me, or elsewhere, next fall and give them to your friends, but the fact that they come from your own garden adds much to the interest.

And here's the best part of it: Most bulbs you plant will make two bulbs by next fall, so you can give away as many as you buy and still have your original number and investment left. In addition to this you will have had the flowers during the summer.

As I've remarked before, the sage who coined the slogan, "You can't eat your cake and keep it too," never grew glads.

For those who have never grown many glads and are not yet "glad fans," my Sunshine or Exhibition mixture will be very satisfactory and pleasing. But if you have friends who grow named kinds, then plan to grow some of the newer varieties, such as Alice Tiplady, Shaylor, Flora, Mrs. Norton, Foch, Crimson Glow, Purple Glory, Mary Pickford, Pink Wonder, Carmen Sylva, Golden Measure.

The bulbs in Exhibition Mixture will multiply more than those in the Sunshine Mixture, because they are larger. Planting shallower (3 to 4 inches) helps to increase number of new bulbs. Peeling off the husk just before planting is another secret of getting more bulbs from the large ones you plant.

Speaking of Magazines

Have you ever seen THE FLOWER GROWER? I think so much of this magazine that I not only subscribe for it so as to get each copy as soon as the ink is dry the first of every month, but I also have a standing order with the publisher for a bound volume to be delivered as soon as ready each year.

This is one of those helpful magazines that gives experiences and suggestions of actual flower growers, big and little. If you stop to think of it, you may recall that some of the best gardening tips you ever got came from a neighbor or friend who chatted with you over the back fence or on the street car or train, in a friendly, informal way about his or her experiences.

Many of the articles in The Flower Grower remind me of just such friendly little helpful chats. That's why I like to read them. And I pick up a great many ideas that are practical and helpful.

Then, too, the editor, Madison Cooper, is not only a man of wide business experience, but is some philosopher as well. His editorials often jump the garden fence and ramble through unfrequented but interesting fields. And he's a real "dirt farmer" or gardener, also.

The Flower Grower has special departments for the Gladiolus, the Iris, the Peony, the Dahlia, the Rose. It frequently contains articles of unusual interest about birds. These are just some of the main departments. Of course there are many other subjects treated from time to time.

The subscription price is \$1.50 a year; single copies 20c, and well worth the price, I'll say. No, I am not taking subscriptions. Haven't time for doing so. Just send your remittance direct to THE FLOWER GROWER, Calcium, N. Y., yourself. Forgot to say that you can get this magazine three years for \$3.50.

Then also, "we have with us" THE AMERICAN MAGAZINE, which I often think of as the magazine of optimism and inspiration. I like the stories of success, detailing not what someone did a hundred years ago, but how men and women of today are winning, often against heavy odds. And—but get a copy at your news stand and see how you like it.

There are so many magazines—seems like there's one born every minute—that I'd hardly know which one to mention next, lest would slight another equally as good. The entertainment and "larnin'" that a well-selected list of magazines affords, is one of the many things within our reach that make life worth living.

Long's Glads Go to Australia

Today (Jan. 3, 1924) I received an order from Australia for gladiolus bulblets, which I had advertised in the November issue of THE FLOWER GROWER. The order was mailed Dec. 3rd, taking just a month to reach Boulder. It calls for 12 different varieties. A postal money order for 6 pounds sterling was enclosed. Nice little order.

In looking up the parcel post regulations governing Australian imports I ran across some very interesting things. A long list is given of articles prohibited. Was glad this list did not include Long's gladioli.

Here are some of the items that can not be mailed to Australia: Goods made in prisons, explosive cigars, carbon remover, beerine, human hair, silencers for firearms, potatoes, suffragette bombs, barber's brushes, used bedding.

In the same mail I received an order from Florida for 100 large bulbs of the popular glad, E. J. Shaylor. Happily, I can fill both these glad orders, but had to refund ten dollars the other day to an Alabama cus-

tomers who sent for pansy plants. Just happened that I got this order when it was 16 below zero in my garden, and as all my pansy plants are right out in the open I had to kiss that ten spot good-bye and start it back to Dixie Land. Told the customer to try again along about the last of March, when my pansy plants will be thawed out and rarin' to go.

King Tut Couldn't Get By

From all reports, it appears that old King Tut was just about 100 per cent human. Times have changed, but human nature runs along in the same old rut.

What's the big idea? Well, I'll tell you what I've been thinking.

With few exceptions, just about everybody seems to be possessed with King Tut's idea—that we can take our earthly treasures with us when we pass on to the Great Beyond.

Tut did make it stick for 3,000 years but just see what has eventually happened! So what's the show of our being able to take with us, to have and to hold, through all eternity, the coin, bonds, houses, lands, and various treasures that we are striving so fast and so furiously to accumulate?

I'm strong for Thrift Week and the idea of saving something; providing for a rainy day, even in dry Colorado. But sometimes I think that what we need more than sermons on saving is sane suggestions and instruction on how to spend a part of our money and time.

I sometimes wish I were not in the seed, plant and bulb business, for then what I say along this line might have more weight. But I'll make a few remarks anyhow, and you can take them for what they are worth.

Instead of trying to accumulate a certain amount of money or property before we die, or before we begin in earnest to do something for the relief and pleasure of others, suppose we begin right now. Maybe right at home would be a good place to practice. How about some more labor-saving utensils and machines about the house for the "Missus"? Or a set of dishes, a rug, a phonograph?

And a larger appropriation for the flower garden would make a great hit—but there now, I told you I'm handicapped when I try to talk sense along this line. I hear you whispering: "Aha! I see the colored gent in the woodpile. That man Long is trying to sell more seeds." And you are absolutely right.

One thing that I like about selling flower seeds is that I can't do this for my own advantage alone, for every packet of seed, every plant or bulb, carries with it great possibilities for brightening the little spot in the world to which it is sent. This does not stop with the family who plants and cares for it. It brightens the landscape, often affording a treat to many who may see it in bloom in the garden. And just think of the sick and shut-ins we can cheer up with our flowers.

There's a lot more I could say—in fact did say on the "once over" page I wrote first—but have cut it out and will close by referring you again to King Tut. Consider him well. See if you are really any more resourceful than he and have any better plans for taking with you a lot of plunder when you cross the Great Divide. If not, then treat yourself to the joy of giving, and real living.

Lady to New Gardener: "Good morning! How's my Sweet William?"

New Gardener: "Just fine—but how did you learn my front name so soon?"

"Them Days Is Gone Forever!"

Up until several years ago I was anxious to get a lot of new names for our mailing list. I appreciate very much the help many of you gave me in this connection, sending names of those who might be interested in gardening and my way of doing business.

I still want you to send me such names, but we now have rather an unusual problem for a seed firm. We are getting more requests than we can take care of. That is, each season we run short of catalogues. Many names received along in the spring and early summer have to be put on the waiting list, to be supplied the next season. The many pages I devote to garden talks are creating an increasing demand for my little informal, home-grown catalogue.

Nevermore shall we ask for or desire big lists from anyone. But send us just several names of people who you feel quite sure would appreciate this sort of catalogue, our high quality of stocks and square dealing. Don't give away your catalogue, as I used to ask you to do. Hang on to it. We may not have another for you until next year. Sure, loan it, but insist on its return. "A bird in the hand is worth two in the bush."

Naturally, you wonder why I don't meet this situation by having a lot more catalogues printed. That's just what many of my business friends urge me to do. But I tell them that I don't want this business to grow any faster than I can handle the increase, giving the same good service that has made us so many customers and friends. I increase the number of catalogues just about 12% each year and that's about as much as I expect to do. I'm not crazy over the big business idea, especially if it works me nights and Sundays and leaves little time for my family and friends. I've done too much of that in the past, when it seemed absolutely necessary. From now on I'm going to get something more than money out of life. Someone else is welcome to the business I might get by sacrificing my health and many other things worth while to get it. That's my platform. It might be worse.

Don't Scramble Your Order

Glad to have you use the order sheet, but it isn't at all necessary. Use any sort of paper, medium size sheets preferred, as they handle best in our files. The one thing that we do like to have you do is to keep your correspondence separate from your order. Separate sheets are best (put name and full address on both the order and letter), but any way will be O. K. just so you don't order an item, then write about something else, and follow up with another item wanted, and so on. In ordering, **put just one item on a line** if you want to help the order clerks. Thanks, that will help a lot.

But, for goodness sake, don't run away with the idea that we are fussy about how you hand us your order. We get 'em on all sorts of scraps of paper. I recall one written on a big slab of wall paper. Another had ink spilled over the page. The lady apologized, saying the little girl tipped the ink over on the page. I didn't do a thing but send a packet of nice flower seeds especially for that little girl. Got my money's worth, too, in a letter the lady wrote, telling what the little girl said, which was something like this, as I remember it: "I think Mr. Long is a nice boy. Dess I'll 'pill some more ink on your orders." But say, don't all of you folks 'pill ink on your orders now, just because I told you this. I might not always be such a "nice boy"!"

Catalogue Nearly Kills Carnations

One night last winter the fireman at the Globe Greenhouses, Denver, was sick. Mr. R. E. Toothaker, the manager, took his place—he wrote me a few days later—and to while away the surplus time, sat down and read my catalogue. Says he got so interested that he forgot the fires and let the temperature go down so low in the carnation house that the carnations almost froze. Mighty glad, though, no lives were lost, lest I might have been haled into court.

Poor Ned! He's Dead—No Wonder!

There was a young person named Ned,
Who dined before going to bed
On lobster and ham,
And salad and jam,

And when he awoke he was dead.
—Woman's World.

It appears that Ned never read my little spiel, "In Old Cheyenne" (see page 59). Learn a lesson from Ned's sad fate and eat a larger proportion of garden sass. You need more vitamins. These you will get in the lettuce, spinach, cabbage, tomatoes, etc. As the lady said: "They are just teeming with pantomimes."

Let Others Talk a Little!

Blessed be mirthfulness; it is God's medicine—one of the renovators of the world. Everybody ought to bathe in it. Grim care, moroseness, anxiety,—all this rust of life, ought to be scoured off by the oil of mirth. It is better than emery. Every man ought to rub himself with it. A man without mirth is like a wagon without springs, in which one is caused disagreeably to jolt by every pebble over which it runs.—Henry Ward Beecher.

'The pansy plants I got from you last year were divided among some friends and were greatly appreciated. Am including some more on my order. They are cheap and very fine.'—O. N. Ross, Orange City, Iowa.

"I have such splendid success with everything from your seeds and roots that it is a real pleasure to plant and care for them."—Mrs. William Otis Wilson, Casper, Wyo.

"I want to thank you for the fine aster seed and dahlia tubers I received from you last year. People would stop at our back yard fence and admire the size and beauty of the asters, saying they had never seen such large asters and dahlias."—E. M. Greenawalt, Chicago, Ill.

"I expect to send you an early order, as soon as the new catalogue is out, as I have quit buying seeds entirely of eastern houses since I have found what prompt service and satisfactory goods I can get from you."—M. M. Foster, Evergreen, Colo.

"Just a few words to compliment you on the wonderful blooms I had from your 'Glad' bulbs. * * * One plant from your 'Professional Mixed' dahlia seed produced a golden red blossom over 6 inches across, with stem 12 inches long."—James R. Bronstrup, Cleveland, Ohio.

"I want to thank you for the way my order was filled and the fine condition in which it arrived."—Mrs. W. S. Werts, Albany, N. Y.

"Do you keep copies of orders? If so, I sure want my order duplicated for next year, for every seed that I obtained from you germinated—just 'full of pep.' My sweet peas are the sensation of the town and I must have the same next year, also more double hollyhock plants."—Mrs. Geo. Nichols, Prineville, Oregon.

Ellis Parker Butler Is "Doggoned" Right About It

For several years I've preached from the text, "Park Your Hens at Home." This year I was about to rise and make a few remarks about dogs in general and dogs in gardens. But our mutual friend, Ellis Parker Butler, famous humorist, author of "Pigs Is Pigs" and many other side splitting stories, beat me to it.

In November (1923) issue of Fruit, Garden and Home (published at Des Moines, Iowa), Mr. Butler expresses my sentiments. With the permission of the publishers, I quote herewith a portion of that article. In doing so, however, I want it understood that I have no grouch against a fairly well behaved dog or its owner who loves his neighbor half as much as he loves his dog. Fortunately, the dogs in my neighborhood respect my gardens.

"My Neighbor's Dog"

By ELLIS PARKER BUTLER

* * * Let me assure you, in the first place, that I have no objection to dogs. The dog, like the mosquito and the pumpkin pie, is all right in his proper place and when properly cared for, but I admit freely that I don't love the mosquito in my bedroom or the pumpkin pie when it lurks on the seat of a chair. In the large open spaces a dog is a delight; it is a pleasure, indeed, to have a farm dog fly out and bite me on the thigh, because the farm is the proper habitat of the dog. And a dog is all right at the end of a leash, or on a chain, or in a fenced yard, or on a lap, or in heaven—but a dog from up street does not cause my heart to swell with love when he comes down to my house and digs up the zinnias. I shall not utter a peep if someone proposes an amendment to the constitution of the United States assuring to every male and female the right to life, liberty and a dog, but I can't say I love to have other people's dogs smeared all over my person and property.

One thing that is needed, if this free and easy dog owning is to go on, is a non-skid dog. The average dog of immature years means well enough but he runs too much to power and lacks control. One of my neighbors has a dog of a breed I should call the Voice Hound, and this dog is kept tied to his dog house in the backyard in a cozy spot where he cannot reach my neighbor's garden but is able to while away his few silent moments digging up my forsythia bushes. I have found that most neighbors are thoughtful in just about this way. * * *

But it is when the dog is turned loose for his gentle evening exercise that I turn my face away and my usual sweet smile becomes a pained grin, for then, in his natural joy, this large young hound leaps in huge circles through all the available landscape, and the available landscape is my yard. On the straight-away he is not so bad but on the turns he skids like a Ford car on a greasy pavement and bangs against tulips, peonies, zinnias or dahlias, according to the season. To vary this he makes wild leaps through the shrubbery, coming out hither and thither like the careless breezes but hitting the annuals harder. And yet the people who own him are quite nice people.

Another dearly beloved canine visitor is the Hole Dog. He comes into the yard from the northwest through holes between the roses and perennials, finding a new hole each time, or making one. I think his home grounds must be hard on his feet for he comes to us mostly in the early spring, just

after our beds have been spaded and harrowed and are soft and full of seeds. In an artless, innocent manner he walks all over the beds, stopping now and then to scratch for bones, evidently thinking the bone meal is the spoor of a bone. On some days he comes over and chases cats—not our cats, we have none—hither and yon, through and over our flowers, or leaps among the petunias trying to catch the swallows. Dear, playful fellow! That dog's highest ambition is to bite a postman, but I have not heard that he has bitten one yet. At night the more distant dogs come to our yard—the noble Garbage Hounds. We hear them at all hours from dark till sunrise, nosing the lid off the garbage can, growling at each other over the shank of a late lamented lamb chop, playing craps with the sweet corn cobs. These, I am sure, are the fearless watch dogs, protectors of their owners' homes, but they seem to have the erroneous idea that their masters' homes are in our garbage can and that they must spill the contents of the can each night trying to find those homes. I hereby give notice that nobody's home is in my garbage can. Never yet have I put any home of any neighbor in my garbage can. I wish they would tell their dogs so.

A dog, well trained and kept where he belongs, is a pleasant and reasonable part of civilization. Now and then he may have some practical value, but his greatest value is in his companionship, and I don't think Mr. Spooglebuck is enjoying much of that dear companionship when Mr. Spooglebuck is twelve miles west from here in his city office and his dog is out back of my house chewing my garden hose. It is possible that that thought gives Mr. Spooglebuck that inner uplift so dear to cultured men, but I doubt it. I know mighty well it makes me want to give his dog another sort of uplift.

* * * About nineteen years ago, just after I came to Flushing, an uncle out in Iowa picked up a stray puppy and sent him to me in a box, by express. I had not asked for a dog, but he was such a fluffy little rascal I kept him. We called him Fluff, he was so very soft and fluffy, but in a few months he changed. He was as big as a small horse—say as big as a Shetland pony—and his hair was like the bristles on a wire hairbrush, and he had a bark like an automobile horn. We kept him tied to a water spigot in the side yard but he was as strong as an ox and one night he pulled the spigot up by the roots and went off, taking three twelve-foot lengths of the iron water pipe with him. So we got rid of him; we gave him to a vegetable grower who wanted him on his Long Island farm. He used him to pull stumps, I think.

* * * And if a man has a Garden Hound that is only happy when digging up gardens he ought to plant special gardens of his own for that dog to dig up. I believe in being neighborly and any time any of my neighbors want to borrow a couple of eggs they can have them, fresh or stale, but I don't believe any man ought to be expected to grow gardens for his neighbors' dogs. If a man don't want to grow his own dog garden he ought to petition the city to grow a community dog garden where his dog could, let us say, dig up the marigolds on Tuesdays and Fridays and skid down the gladiolus Wednesdays and Saturdays. In connection with this the city could set aside one corner as a Community Garbage Can Park, and keep a few hundred garbage cans there for the wandering Garbage Hounds to rummage in.

SOME GARDEN SECRETS

"What's In a Name"

These garden talks "by any other name would spell the same" results in your garden. I might have used any one of a dozen other titles, but after considering them all, decided on *Some Garden Secrets*, for two reasons.

First, to arrest your attention. Now isn't it a fact that we all prick up our ears and listen in if we think someone is about to spill a secret? Another title might have served as well, and that is, "Confessions of a Gardener." Next to secrets, confessions grip our attention. Guess it's about fifty-fifty with secrets and confessions.

The second reason for my choosing *Secrets*, is the fact that most folks—you and I excepted, of course—but most folks, no sooner learn of a secret than they have a burning desire to tell it to some one else.

It is not my purpose to follow any logical order of arrangement of my subjects, or the alphabetical order in mentioning culture of various vegetables and flowers. Instead of beginning with asters, I'm just as likely to tackle zinnias first. Thus I can leave out some things and you may never notice it! Also, when I have talked these 16 pages full I can quit and call it a day.

Not a Filling Station

A seedsman owes a certain amount to his customers in the way of service, and I wish to meet my personal obligation in this connection. But to do so and still remain solvent, I must pay in a wholesale way. What I mean is that I can afford to devote the time and expense required in writing and giving out these pages, the same to all, whereas it would bankrupt me to write each customer personally regarding the problems that might be referred to me.

Having said my say herewith, I'm done, for this year at least. I feel that in giving you "*Some Garden Secrets*" and referring you to an almost unlimited supply within your reach, I have done my bit—and then some. I cannot give additional time to answer, personally, questions that are often referred to me, though I should like to do so. My store and gardens are at your service, and demand so much of my time and attention that my office is not a filling station, dispensing garden lore—or "free air."

Backward, Turn Backward!

"Bredern and sistern," said the colored pastor, "I'se a gwine to dewide disyer discese into two parts. Fust, all dat am in de text; second, all dat am not in de text. And now I'se a gwine fer to wrassle wid de second part fust." That's about my own plan, as you will see.

For my "Firstly," I'll talk about fall gardening—things that are not often included in the text or discourse on gardening—things you should have done last fall—things that are too often left undone, much to the detriment and inefficiency of your garden. Would that we might bribe Time to turn backward and give you a chance to do that fall garden work so as to reap the benefit this coming season.

I take this subject up right here, lest it might be crowded out if left for its natural place—at the end of the list of the year's work. I deem it so important that it should

slighted. All right, forget last fall, but plan for next fall. And don't you forget it! be considered even if many other things are

Now for this fall garden work: First, the garden should be thoroughly cleaned up. Right now, in the fall, is when you should wage war against garden pests that have designs on your next season's garden. Late in the fall, before ground freezes, go over everything, including the ragged edges along the fences, in the alley, etc. Sort out the trash, dead vines and plants. Save the coarsest for covering pansy beds and protecting other perennials that may need it. Pile up all the rest and burn it. Still better, spread the trash over such portions as may have been neglected and have invited garden pests to take furnished apartments for the winter. About the time that fire gets started, Pa and Ma Bean Bug will think it has been a mighty short winter. Other pests will view with alarm the sudden rise of temperature.

Leaves and trash that do not seem to harbor pests, may be saved for turning under to add humus to the soil. Right now is the time to rustle some stable manure for the garden. Yes, I know it is getting harder each year to secure this much needed item for your garden, but in most localities there is still enough for the wise ones who go after it in time—before the spring rush, when everyone begins to think gardening. Get the manure in fall, because it is easier to obtain then, when few are in the market for fertilizer. A still more important reason for "shopping early" is that manure plowed or spaded under in the fall will do your crop more good than if applied in the spring, especially if the manure is coarse, or fresh. Coarse manure is often better than fine, for the reason it contributes much needed humus to the soil. Fresh manure will not burn your spring plants if applied the fall before.

Now then, having cleaned up the garden, secured the fertilizer and spread it evenly, breaking any lumps as fine as possible, get busy and plow or spade the soil to a good depth. But do not pulverize it as you would in the spring. Break up the largest lumps, if any, but leave the top soil rather rough, to avoid blowing away. Don't worry about the lumps. Nature will pulverize them. That's her job, but she wants you to do this preliminary work. Moisture, alternate freezing and thawing will put the soil in better shape—if exposed by fall plowing—than you can beat it into by main strength and awkwardness. Sure, you will have to put on the finishing touches in the spring.

This late fall upheaval of the garden does more than put it in shape for Nature's pulverizing and mellowing work. It exposes many of the pestiferous garden pests in various stages of their development and knocks their plans galley-west. Don't forget the outlying districts—the corners, along the fences, etc. Go after these pests. Treat 'em rough.

Hold on!—don't put up the shovel and the hoe just yet. There's a right smart of planting that can be done better in the fall than in the spring, and some that must be done in the fall only. That which must be done in fall only is planting of what are known as fall bulbs, or Dutch bulbs, as mostly grown in Holland. These are the lovely tulips, hyacinths, narcissus, crocus. Nothing doing in spring for these. Must be planted in the fall. Nature says so.

Tools and Their Use

While wheel hoes, seeders, etc., are very helpful in the small garden and almost indispensable for extensive operations, yet for the ordinary home garden not a great many tools are needed, and some of these can be made by yourself.

You should have a good medium-size hoe and rake, strong spading fork, small but strong garden trowel. A three-prong cultivator with long handle is a very valuable tool. These are made with five prongs or teeth also, but three will pull easier and do a lot of work in a short time. With this tool you back up and pull the cultivator towards you, giving the soil an ideal treatment, and leaving it loose and mellow, with no foot prints to pack the soil. The trowel comes handy in many ways, for transplanting and digging around in close quarters. For still finer work, get a common putty knife, one with blade running through the handle and riveted to it. You'll be surprised how often this knife can be used for weeding, thinning, and stirring the soil between small plants. Saves a lot of time and does the work better than could be done otherwise, in many instances.

Such tools as markers, levelers, etc., you can make as needed. A piece of 4x4 two feet long with stick nailed to it for handle makes a good leveler. A 2x4, 12 to 18 inches long, with laths nailed to it, for teeth, projecting half an inch, serves as a marker for making little trenches across the beds for fine seeds. The lath can be spaced as far apart as you wish the tiny rows. I use such a home-made tool for marking out my pansy beds. Laths are nailed flat against the 2x4 and about 2 inches apart, so by drawing it across the bed it makes 5 rows at a time. Most anything will do for a handle, as there is no strain put upon the tool in use.

Plowing the garden saves hand work, but there are always some corners that should be dug up with the spading fork. A fork is much better than a shovel, and requires much less man power. Whether the garden is plowed or spaded, the ground should be broken up fine right then and there. Smash the lumps with vigorous strokes with the fork as the soil is turned over. Here's a case where "a stitch in time saves nine." Follow right up with the rake and pulverize as deep as the teeth will go, especially if for small seeds. For large seeds, such as peas, beans and corn, less vigorous treatment is required. This immediate pulverizing of soil is for spring treatment, not for fall. Leave the fall spading or plowing rather rough, as mentioned elsewhere.

Few people know how to use a garden rake to best advantage. If there are lumps and clods, many gardeners will rake mostly towards themselves and accumulate most the lumps at their feet, and leave many more just under the surface. A rake should be worked full capacity both going and coming. Push it deeply into the soil, both ways. Strike the clods smart, quick blows with the rake teeth and you will be able to annihilate the whole works, and leave the bed with fine soil several inches deep—just the ideal seed bed. Then again, the rake can be used instead of the hoe many times. Try raking many kinds of plants when small, by pulling the rake right across the rows. You may kill some plants, but usually they need thinning anyhow. This stirs the soil right where cultivation does the most good at this stage. Keep the rake busy also trimming up rough places from time to time. It gives the garden a tidy appearance, as well as helps prevent baking and packing of the ground.

As the plants grow larger, use the hoe and three-tooth cultivator more, keeping the soil good and mellow and making it decidedly uncomfortable for the weeds. At times, try taking off all but one tooth of the cultivator for close work that might otherwise have to be done down on your knees. It's surprising how much execution can be done with a very small tool if kept in motion.

To Grow Stunning Zinnias

There, I said I might tackle zinnias first. I've sort of got zinnias on the brain, I guess. Anyhow, I'm crazy about them, since we have now the new monster varieties in such dazzling and stunning colors. In fact, they are all the rage now, these wonderful zinnias. And it's no wonder! Day after day I hear the same exclamations from visitors to my gardens: "Why, I never saw such zinnias! Honestly, are those really zinnias? Well, well, I've got to have some myself next year!" These zinnias are thrillers, all right.

The splendid thing about this is that you yourself can grow them just as fine as I can. It's easy if you know how. And you'll know how in just another minute. All I do is to use the best seed the world produces, of the Colossal and Dahlia Flowered strains. Plant right out in the open garden about ten days before I think the last spring frost will come. But I'm getting ahead of my story. I should have begun by saying I select location exposed to sun all day if possible. Zinnias are sun worshippers. Then I sure do give that ground a heavy dressing of manure before plowing. Fall is best, but spring will do. Seems like zinnias will stand almost any amount of manure, if well mixed with the soil.

I plant in rows about two feet apart, covering the seed $\frac{3}{4}$ inch, then keep the ground moist until plants show up. Begin cultivating soon and keep it up until plants half grown. Thin the plants to nearly a foot apart in row. Transplant if needed elsewhere. Very easy to transplant.

One thing more. I give them lots of water, alternating irrigation and cultivation. Use either overhead sprinkling system or ditches along the rows. That's all—except to enjoy the sight when they bloom, and see others do the same. I sell a good many as cut flowers. They keep branching out and throwing out new flower stems and blossoms, so you hardly miss a lot you may cut. Have a customer in Denver who makes a bunch of money selling these zinnias to customers who call for them at his garden. Size of plants and flowers can be increased by a top dressing of manure after plants a foot high or so. Pulverized sheep manure is fine for this.

Use Hoe More, Hose Less

We who have city water, or ditch water at our beck and call, are apt to use too much water and neglect cultivation. When seeds are germinating and while plants still very small it is fine to give a light spray often. But after the plants get well started then we should give heavier waterings, and fewer of them, cultivating between irrigations, and depending more on cultivation and a dust mulch for moisture. Too much water tends to pack and sour the soil. Light and frequent sprinkling encourages the roots to stay near the surface, instead of going down deeper and finding more plant food, also fortifying themselves against possible drought or neglect later.

How to Grow Beautiful Flowers from Seed

By observing these general suggestions you will be able to grow the different kinds of flowers, even though I do not give cultural directions in connection with each number on my list. Read this page once a week all season. I've boiled it down; there's a lot worth knowing and practicing in these few lines.

DO RIGHT THING AT RIGHT TIME

Unless your soil is quite sandy, be very careful about working it when too wet. Take a handful and squeeze it into a ball. If it fails to crumble when pulled apart, then it is fine for making marbles or 'dobe bricks, but too wet for working. Lay off until it dries out a bit more. You will gain in the long run. Some soils will not get over such handling, the rest of the season. You may work it down apparently fine, but there will be small lumps that will not pack well around the seed. Many times such soil will let the air in to the seed, dry it out and prevent germination.

PREPARING THE SEED BED

Next to securing the best of seeds is the matter of preparing the soil at the right time and in the right way. Every year I tell you to plow or spade up your gardens in the fall, leaving the ground rough so that Nature can work all winter for you, freezing and thawing the clods and making the ground mellow and fine for spring. Late fall plowing will also put a finish to many insect pests. I note that few people do this, but that's your loss.

You must have the surface fine and mellow to get best results, especially for fine seeds. After spading, use the rake vigorously and don't quit until you have the top soil as fine as possible.

For convenience in sowing, cultivating and picking the flowers, I like to lay off my gardens in beds about four feet wide, working from the paths and not tramping between the rows in the beds.

SOWING THE SEED

The finer the seed the shallower it should be covered. Petunia and other very fine seeds should be barely covered, other seeds that are larger should have one-fourth of an inch of soil over them, while the still larger seeds like nasturtiums and sweet peas may go down one to two inches. In this and all other work in your garden just use common sense. Imagine yourself one of the seeds and think how you would like to be treated. For extra early plants you may start the seed indoors, but for most things I prefer to wait until they can be sown in the open. I prefer the hardy, husky, outdoor-grown plants.

GERMINATING THE SEED

The smaller the seeds and the shallower they are sown the greater the danger of the light covering of soil drying out before the tiny roots get a good foothold in the ground below. Here's just where many people fail and then blame the seed and seedsmen who supplied it. As a matter of fact, seeds retain their vitality for years and it is indeed seldom that failure to germinate is due to poor seed. You must neither cover the small seeds too deep nor let them dry out a single hour if covered shallow. On the other hand, you can prevent germination by flooding and keeping soil excessively wet.

Now here's a secret! After sowing and covering fine seeds very shallow, spread a thin layer of excelsior, torn to shreds, or coarse hay or straw over the bed, holding it in place with poultry netting well staked down. Or if the netting is not at hand use brush,

cornstalks, or anything that will not smother the plants. Burlap may also be used in place of the excelsior. This prevents wind blowing the soil and seed away, and prevents seed from being floated into piles when watering the beds, and keeps the soil from drying out. As soon as the plants show up, then remove the covering.

It took me a number of years to discover that many of my failures with small seeds were due to my not getting them covered, and to slight neglect, just at a critical stage, which allowed the soil to become dry, killing the tiny roots just starting.

This drying out is a serious matter and I can't say too much in trying to impress on you its importance. You see, at best, the tiny roots from small seed are very close to the surface. Just the least dryness, and it's good night for them. That's why I advise the excelsior, burlap or cheese-cloth covering.

I used to sow pansy, aster and other small seeds on top of bed and rake them in—or try to rake them in. Now I either sift a thin layer of fine soil or sand, or the two mixed, over the seed, or, more often, I make shallow trenches with a stick or marker, sow the seed in them and cover. Sometimes I make these tiny furrows close together and sow the seed broadcast, then rake it all over gently and evenly. This gives the seed a 50-50 chance of getting covered a suitable depth. And if half the seed germinates the plants will be thick enough.

CULTIVATING AND WATERING

Weeds are great bluffers. Get after them from the very beginning in a manner that will give them to understand that they might just as well give up the battle first as last. However, weeds are useful, for they keep us digging and scratching around the plants and thus giving the top soil just the treatment it needs, but without them many would forget to keep the soil so thoroughly worked.

Remember that plants need air as well as moisture. Keep the soil loose.

Furthermore, frequent stirring of the soil conserves the moisture and if you will "Use the hoe more" you will need to "Use the hose less." Most people water their plants too much and do not cultivate them enough, and for that reason I have adopted the slogan, "Use the hoe more and the hose less." That's where you have a hose, of course. The same applies to irrigating from a ditch. Dry farmers get good results by using the hoe often. When I say hoe I mean anything from a hairpin to a tractor that will stir the soil. I use a garden rake a great deal in place of a hoe when plants are small. With some plants you can rake right over the rows without injuring the plants. Rows of gladioli from bulbets can be raked until plants are six inches high.

NOT ALWAYS TRUE TO COLOR

Do not be surprised if flowers planted in separate colors do not all come true to color. There is always a chance of slight mixing in the handling of seeds, with the best of care. Moreover, plants will "sport" at times. That is, they will produce flowers different from any known distinct variety. This is a virtue instead of a fault, for many of our finest varieties came by chance in just this way, the grand Giant Spencer sweet peas being a notable example. The new red sunflower, which originated here at Boulder, is another example. Zinnias do not all come true to color.

How to Grow Gladioli

The gladiolus is propagated in three ways: By multiplication of the large bulbs, by the tiny bulblets that are found around base of bulbs when digging, and by saving seed that sometimes develops on top of the spike. Stock from bulbs and bulblets comes true to the original, but seed does not. Growing from seed is slow and somewhat difficult, taking several years to get blooms, so I shall consider the first two ways only in this limited space. Gladioli do not mix from growing near other varieties.

WHERE, WHEN, HOW TO PLANT

Plant in any good garden soil where they will have plenty of sunshine. Don't forget that Glads love sunshine. They do best right out in the vegetable garden, or under same conditions as vegetables are grown. Plant any time from early April until June. Good idea to plant some every two weeks to keep a supply of flowers coming on all summer and fall.

They bloom in about 90 days from planting, depending on variety, vigor of bulbs, depth planted, culture, season, etc.

As I've often said, "Standing room only" is all that Glads require. Mass them in rows or beds, setting the bulbs 4 to 8 inches apart. If in rows, set double or triple rows. Dig trench, set bulbs where wanted, fill trench and job is done.

Cover small bulbs about 3 inches, larger ones 4 to 5 inches. The new bulb is formed on top of the one you plant and if too shallow your flower spikes will blow down. Deep planting saves staking. Hilling up around the plants also helps to prevent blowing over.

Cultivate between rows, and plants in the rows, often, keeping soil loose and porous. Water frequently. Glads like lots of water, but with good cultivating will get along with less water.

USE GLADS FOR CUT FLOWERS

While Glads make a nice display in the garden, yet they are much more valuable and satisfactory as cut flowers.

Cut them just as soon as the lower blossom opens. Cut stem so as to leave 4 to 6 leaves on the plant to mature the bulb. Place in vase of water and the buds will open from day to day just as they would in the garden. As the lower blossoms fade, pull them off, so as to keep the bouquet looking tidy and cheerful.

Keep watering the Glad beds after flowers are cut or have quit blooming, so as to mature the new bulbs. These do a good part of their growing after flowers appear.

DIGGING AND STORING THE BULBS

After frost in the fall, dig the bulbs and cut stem off at once about one-fourth inch above bulb.

Save the larger bulblets of such varieties that you care the most for. Do not expose the bulbs to hot sun or frost, but they may dry a day or so in the shade. Hang up in porous bags—a common sugar or burlap bag is very good. Or, use shallow boxes. Store thus in cellar or any place where they will not freeze or get too dry.

HANDLING THE BULBETS

Before planting remove the old bulb. Plant the bulbs and bulblets separately. Sow bulblets thick in a row like peas, 100 to a foot or two of row—and cover about one inch. Soak bulblets—not bulbs—a day or two before planting. Water should be kept luke warm. Keep them thoroughly wet after planting.

These bulblets will make small bulbs by fall, which, planted again the next spring, will mostly bloom and all should make ideal bulbs for the year after that.

To Grow Fine Sweet Peas

One secret in growing finest sweet peas is getting them into well-prepared ground rather early in the spring. True, later plantings often do well, but the sweet pea thrives best under rather cool, moist conditions. If given a chance the sweet pea will send its roots way down deep into soil that keeps somewhat cool and moist even in hot weather. But it must get an early start to make this deep root growth. Deep digging and pulverizing of the soil encourages this deep root development.

It is not necessary, however, to break your back digging a ditch deep enough for a water main, though some trenching is good. In doing this, lay aside the top soil, dig and pulverize the subsoil, mixing manure with it, then put back the top soil. Many growers do not fill the trench quite full, but draw the soil to the plants as they come up. But planted on fairly good soil, well-worked up, and on level ground, sweet peas will usually do nicely. A good scheme in either plan is to make a trench say nearly a foot deep right up close to the sweet pea row. Fill this trench with manure. Some soil may be put on top. Then during the season turn water into the trench once a week or so. The enriched water will find its way to the sweet pea roots and stimulate growth. A little bone meal worked into the soil at time of planting is also good. But use this sparingly, as is very strong. Avoid use of fresh poultry manure.

An ounce of seed will sow from 15 to 20 feet of row. Make furrow with hoe, and see that bottom of furrow is rather flat or U shape, instead of V shape. This gives each plant more feeding ground. Cover an inch or little more, firming with the feet if ground not wet. Begin cultivation as soon as plants are up and keep the soil well-loosened as the plants grow. Water by running a small ditch along the row, giving a good soaking once a week or so, rather than just a little every day. But the sprinkling system may of course be used instead. Lice or aphids often check the growth. Watch for them. Spray with contact poison, getting under the leaves, where these pests are most numerous. Remember you can't kill lice by putting poison on the plants. The tobacco or kerosene emulsion must hit the lice to do the work. Dashing the vines several times a day with the hose checks the work of lice. Give the vines support and train them to it, beginning early. Keep blossoms picked. The more you pick them the more and longer they will bloom. To pick sweet peas, grasp the stem close to where it is attached to main branch, push towards, not away from, the branch. It parts easily from branch this way.

Make a Good Beginning

I don't care whether you run your rows east and west, north and south, or catty wampus, but do make them straight! Really, it doesn't take much more time at all. Keep a strong jute cord handy and run a line when planting. You will, I believe, enjoy working in your garden the more if you make this right start. Don't listen to the fellow who argues that he can grow more in a crooked row than in a straight one, because a crooked row is longer. I'll just bet he will not do it, even if he could, for the fellow that takes pride in his straight rows is also likely to give his garden better care than the crooked row fellow, and will beat him in yield.

How I Grow Pansies

In the first place, I use only the best seed, my Super-Giant strain that I've improved from year to year by careful selection, and adding a little from time to time when I find something extra good offered by some other growers.

A little shade is good for pansies, but very much is not. Much shade produces soft, gangling, weak plants and few blossoms. Most all my pansies are grown right out in the open garden, with no shade at all. But good seed alone would not produce the gigantic blossoms to be seen in my gardens. The soil must be rich for best results. Not too much manure, nor too fresh, should be applied, for it might burn the plants or cause them to turn yellow. But if the manure is well mixed with the soil, especially if this is done the fall before, the plants will stand a lot of such fertilizing.

My own beds for blooming are almost always set out in the fall. That gives them a big start early the next spring, and produces the long branches and extra large blossoms that we sell as cut flowers for Memorial day. Next best thing is to set them out early in the spring, the earlier the better after ground can be worked. I'm talking now about my outdoor-grown plants, that stay in the open garden all winter with little and sometimes no protection. You could not safely plant the forced, tender, hotbed kind so early.

Plants may be anywhere from 5 to 12 inches apart, according to room. My rows are about 20 inches apart and the plants about 6 inches in the rows. Sometimes the plants just about cover the whole space, and are almost "knee high" at their best. This is the result of good seed, rich soil, planting at right time, frequent cultivation, and plenty of water.

After pansy plants have bloomed luxuriantly for a while in rich soil, and have been mauled over a good deal in picking the flowers, they get tall and ragged, and flowers not so large. Then I shear off the beds within say an inch and a half of the ground. New sprouts start up at once and in several weeks the beds again begin to bloom, and plants are more compact and sturdy. In picking pansy blossoms I always take part of the branch as well as the stem. Thus the branch, leaves, stem and blossom, make a cut flower one may never have believed possible from a pansy bed. And it doesn't take many such branches to make a nice-sized bouquet. Cut this way, pansies can be used in vases, and last a number of days. Taking the branch, down within two inches of the root, is good for the plant. Others will grow.

I know of only three pansy pests. One is a special pansy worm, not numerous, and can be dealt with by hand picking, though arsenate of lead could be used. Lice and red spiders are the other two. Lice can be controlled by frequent spraying with tobacco solutions, mentioned elsewhere. Presence of ladybugs indicates lice. The ladybugs will, if plentiful enough, clean up the lice. Don't kill the ladybugs. Red spiders protect themselves with their fine webs, so it is hard to deal with them. Best method is frequent sharp spraying close to and all over and under the plants, with hose. They can't stand much of that.

Pansy seed sown outdoors about middle of April should produce plants that begin to bloom last of June, and continue blooming until ground freezes. Protected a little, as I have suggested, these plants should live over winter and begin blooming early the next

spring. An earlier start may be had by sowing the seed indoors along in March. Takes 12 to 20 days for pansy seed to germinate. Any dryness during this time means failure. See notes on germinating small seeds elsewhere. My favorite time for sowing is August 1st to September 25th. The plants I sell are from such sowings. Many of you may find it more satisfactory to buy the plants at the low price I sell them than to bother trying to grow them yourselves. Practically every customer is pleased with these small, sturdy well-rooted plants, and surprised to see how quickly they establish themselves and get right down to business turning out delightful blossoms.

Our Boulder climate is milder than in many places, though we do have real winter at times. Some of my older and stronger pansy plants are just left to rustle for themselves. I don't cover them at all, and they usually come through all right. The smaller ones, from fall-sown seed, I usually cover with excelsior, torn to shreds and spread over the beds just so it hides the ground—simply to prevent soil drying out and thawing out too much, and keep the winds from whipping the plants. This covering is held down by poultry wire well-staked along each side. My beds are 120 feet long and 3 to 4 feet wide. I use the excelsior on the very smallest plants from latest fall sowings. Other beds are covered by throwing the old dahlia and zinnia stalks over them. I'd use brush, too, if I had it. All covering comes off very early in spring, to keep the plants tough. Tops of plants thus wintered are tough and sure look tough at first, but the roots are strong and if the roots are good the tops soon come on fine and dandy. I might explain that the rich soil I mentioned is for permanent beds only. The small plants for spring are grown in ground not very rich, in accordance with my plan to develop strong roots and not force the tops before sending out to be set in your gardens.

How to Grow Asters

The aster does best when brought to flower late in the season. It comes in after many other flowers have come and gone, and will bloom right up until rather heavy frosts. However, a succession is desirable, and can be had in several ways. By planting seed at intervals of several weeks from March indoors to last of May outdoors, you can prolong the aster season a number of weeks. Planting early and later varieties at the same time will also accomplish this to a considerable extent. My mixtures of various kinds in separate colors and all colors mixed, contain varieties that will not all bloom at once. Royals are medium early, Crego and Astermum a bit later, and Boulderado Beauties largest and latest of all.

Asters transplant easily and may be started indoors, but do very nicely sown outdoors any time after early April. They stand quite a little cold. Read about germinating small seed elsewhere. Plants should be set or thinned to 6 to 10 inches in the row, and rows a foot or more apart. Extra rich ground may cause stem rot. Fairly rich ground is good, but should not be given fresh manure. Just good garden cultivation and watering should produce a fine crop, though more or less of the plants may be taken with the blight, for which there seems to be no definite preventative and no cure. A good rule is to plant more than one expects to pull through unharmed, so that after some may drop out during the season you will still have a good supply left.

Some Dahlia Secrets

Dahlias are propagated in three ways. The most common method is by planting a bulb—correctly speaking, a tuber. This tuber produces a large plant with as many stalks coming out of the ground as there were live eyes on the tuber. One is best, though two do pretty well. More than two are too many, and any extras should be cut off below the ground. This plant or hill, produces by fall, a clump of tubers, all attached around the base of the stalk. The eyes of these tubers are always close to the end that is attached to the stem. In fact, the eyes are located on the stem or at the junction of tuber and stalk or stem. Nail this fact right now, for it is exceedingly important to know it.

Never plant the whole clump, taken up in fall, the following spring, as will produce too many stems, which will be slender and weak and produce weak flowers. Divide the clump by cutting down through the stalk, leaving a portion of the stalk with each tuber, so as to get an eye for it. By keeping the clump damp and warm, in soil or out, the eyes will start to sprout, and then you can see where they are. A tuber without an eye is absolutely worthless. Dividing is a strenuous job, but must be done. Professionals use a large size one-hand pruning shears. Other tools that will help some are chisel, or good butcher knife. A safety razor is not recommended.

Professional growers get so expert in dividing tubers that they not only try to get a tuber for each eye, but even divide an eye, getting two plants from one eye. This is done on new and expensive varieties to increase the stock as fast as possible. One could keep on and on, and still find something more to tell about the growing and handling of dahlias. I must not close without cautioning you about handling clumps. If you treat 'em rough, you will injure or break the necks of the tubers. A tuber with a broken neck is about as full of life and pep as you would be with your own neck broken.

The size of a dahlia tuber fools a good many amateurs. Most people think they have drawn a prize if they get a great big tuber, whereas such may be all right, or it may be much less valuable than a smaller one. Different varieties vary ever so much as to shape and size of tubers. Some make quite small ones, while others produce large, ill-shaped tubers that are hard to handle in dividing and mean to pack and ship. I had to discontinue one really good kind because some of the tubers were almost as big as my arm. Would have to ship by freight or lose money on them! Even an eye without a tuber will grow and produce a good plant, if handled right.

That's so. I forgot to tell you what to do with dahlia tubers when received before time for planting them. If left to lie around they may dry up so much that will not sprout. It's easy enough to keep them in good condition, if given a little attention. If they come packed in moss, save the moss, dampen it a little and keep the tubers wrapped in this moss, examining every week or so, to see that the moss has not dried out. If getting dry, dampen a little more from time to time. If no moss available, just use newspapers, dampening a few layers next to the tubers and wrapping in plenty more to prevent rapid evaporation. No harm is done if the tubers sprout, but just before planting, cut sprouts off within half inch or so of the tuber. Or, if sprout is short and sturdy,

leave it on, planting carefully with sprout up. Weak and spindling sprouts should be clipped off, however.

Tubers should be planted any time from early April to June. Takes three weeks for them to come up. May be covered if frost comes after plants are up. If young shoots do freeze, they are not lost. Cut them off at once just above the ground. They will come on again, from tubers.

Last of April and early May are safest dates here. Not much is gained by earlier planting. I always wind up my planting the last of June, and usually get by with it very nicely, as my gardens are so located and protected by the nearby mountains that we do not get the first fall frosts. In general, from last of April to June 1st is best. Ground should be dug deep, 10 to 12 inches. Lay the tuber flat—get that? Cover 4 to 5 inches. Hills should be about 2 feet apart in row, and rows 3 feet or so apart. Cultivate, cultivate! Water moderately until buds appear and from that on give lots of water, not frequent light spraying, but good deep soaking once every 5 or 6 days. Shade or excessive fertilizing, or both, tend to produce luxuriant foliage, but fewer blossoms. Just fairly rich ground is O. K.

In the fall, after killing frost, cut tops off near ground. Dig very carefully with spading fork, so as to unearth the clump without damaging any of the tubers clinging to base of stalk. Hold the clump in one hand, and tap top or side of the stem to loosen the soil. Soil may be left on, but makes a lot of heavy work. Cut stem once more, this time within inch or little more of where the tubers are attached to it. Lower cutting might leave too many eyes on the discarded stem and too few with the young tubers. If taken up when ground is wet and sticky, a hose may be used to wash the soil out from among the tubers.

Without further delay—in our dry climate—take the clumps to a dry cellar or basement, safe from frost. Pack in boxes or barrels. If these not tight, line them with paper. No soil, sand, leaves, etc., needed, though might be used if desired. Watch these clumps during the winter. Must be dry enough not to mould, yet must not dry out and wither. If seem too dry, spread damp newspapers or cloth over tops of barrels or boxes, as often as needed. Keep them away from furnace. However, if do shrivel badly, don't despair, for they may grow anyhow. Divide any time in spring. So much for dahlias from tubers and divisions of tubers. Just a word more. Dahlias do not mix, planted close together. They come true, from tubers.

The third method of propagation is from cuttings. This may be done, and usually is, by planting the clump or divided tubers in the greenhouse and taking the young shoots, rooting them and potting, to be set out later in the garden. But you can do this—if you are patient and watchful. When your plant from tuber is a foot high or more, out in your garden, cut out the middle, so as to get two or three pairs of leaves with it, and leave several pairs on the original plant. The plant will throw out new side shoots and take care of itself, making more of a bush than if center not cut out.

Now pinch off the two bottom leaves and plant this cutting in any good garden soil, giving shade most of the day for a few weeks. Keep watered and give it time. I have done this and produced plants that bloomed nicely, thus making two dahlias bloom instead of one.

Garden Strategy

Often we can save work by doing certain things when conditions are most favorable, or thinking a little harder when new problems arise. Cultivating the ground with rake or hoe before a weed shows up may kill millions of them just starting. Thinning plants or weeding the rows when the ground is just moist and soft enough so the plants come out easily saves time and insures a good job. Stirring the soil at just the right time after rain or irrigation conserves the moisture and cheers the plants wonderfully. In short, by working more from the neck up we shall need to work less from the neck down.

For instance: In the fall of '21 we dug a lot of Le Marechal Foch and Flora bulbs and bulbets. The bulbets of these new varieties were valuable, so we wanted to save them all. We shoveled dirt, bulbets and all into gunny sacks after removing the bulbs from the rows. Then we washed the bulbets. This usually leaves them nice and clean, and is done in this way: We pour a painful of bulbets, dirt, gravel and whatever trash may be included, into a wash tub. Then, with a hose, we fill the tub nearly full of water. The lighter trash, such as pieces of gladiolus roots and husks, is then floated off. The tub is again filled with water, and contents stirred or agitated rapidly which causes the bulbets to swim, but the soil and gravel remain in the bottom. Tipping the tub quickly floats off the bulbets into trays with fine wire screen bottoms. Repeating this several times separates all the bulbets, and the job is usually thus completed.

A new problem arose this time. It appears that this soil had been the happy hunting grounds of many angle worms. The worms were loath to part with Foch and Flora. In fact they were set on staying with them, through thick and thin. They refused to float off with the light trash, and were equally head strong about remaining with the dirt and gravel in bottom of the tub. Therefore we had to unscramble about two bushels of bulbets and angle worms somehow. We could employ the tedious process of picking out the worms, or picking out the bulbets and leaving the worms.

What would you have done? Planned a fishing party, inviting a score of boys, turning them loose to dig for bait in these trays of bulbets? Good! I also thought of that. Not a bad idea. But I thought of another plan. We always keep quite a flock of chickens. Occasionally, not often, they get out and romp on my gardens and my temper. Sez I to myself, sez I: "You fool fowls owe me something. Here's a chance for you to make good." So we spread the contents of the trays out thin and carried the trays into the chicken yard. As anticipated, a big white Blufforpinhorn rooster soon jumped aboard a tray and called out: "Hear ye! Hear ye! First and last call for lunch. Hurry, but don't crowd. Women and children first!"—then, rooster-like, proceeded to gobble up as much of the lunch as possible. The festive board was quickly surrounded. Soon those bulbets were clean, ready to dry and ship.

Don't Kill the Cops

If Mr. Toad is found in your garden, don't harm him, but treat him as a friend, for he is your friend, arresting and executing garden criminals.

If your sweet peas or pansies seem sick and you find lady bugs on them, don't jump at conclusions. It's lice or aphids that have injured your plants, and the lady bugs are there trying to exterminate these pests.

Why Is a Weed?

How many times have we wondered why in the world there should be such things as weeds, also insect pests. I'm still wondering about the latter, but have a very firm conviction that the weeds serve a good purpose in one way at least. If weeds didn't grow as they do, the most of us would just naturally neglect the important matter of cultivating our plants. We might say we wouldn't, but I'll just bet we would. Our gardens need frequent stirring of the soil, both between the rows and among the plants, and it is in getting after the weeds, or trying to get the drop on them, that we give our plants this much needed cultivation, letting air in to the roots, putting the food elements, that the soil contains, into such shape that the plants can get hold of and utilize them.

Don't Kill Big Weeds!

No, I don't mean you should let them remain and go to seed. Don't worry about the weed seed crop for next year. There will be ample of this anyhow. What I mean is, don't ever let the weeds get big. Cut them down, or pull them up, in their tender youth. Funny, isn't it, how we think we are really doing something great when we slaughter large size weeds, but we don't feel half that glow of satisfaction when we kill 'em off when small and when it is so much easier done. But the time to get the weeds is before they take their toll from the soil's fertility. Frequent raking, hoeing and cultivating will get the weeds just as they are sprouting or opening their eyes on a very unfriendly world—for the weeds.

How to Transplant Weeds

This is easy. It's a natural gift with some gardeners. Simply have the ground wet when you go forth to give the garden the once over. Cut the weeds off well under the roots, but don't scatter them about. Follow the hoe with your feet, packing the recently loosened soil as you go. Then to complete the job, turn the hose on before the soil has had time to dry out well after hoeing. This treatment is practically sure to leave a good stand of weeds, full of life and pep.

Headwork and Footwork

Headwork is needed in all garden operations. Footwork is valuable at times also. For instance, when sowing and covering seed in rather dry ground, firm the soil well by walking right over the row. This brings the soil in close contact with the seed and prevents further drying out. Often seed will sprout planted this way, whereas if left with only the loose soil over it, would fail to germinate. Use the rake gently over the row after this treading. In transplanting roots, shrubs and trees, it is important to tramp or tamp the soil very firmly.

Burning Seeds and Bulbs

I know a lot of families who think they just can't afford anything more than the bare necessities for the home garden. They can't figure out an appropriation for a few nice flower seeds and bulbs. They really feel that way about it.

Yet they think nothing of taking a needless spin in the flivver of ten, twenty or fifty miles. Every mile burns up a packet of flower seeds or a gladiolus bulb. "Man has two great ambitions in life. One is to own a home; the other, to own an auto to get away from home." Funny, isn't it? Maybe if said man would go stronger on flowers around said home he might not be so eager to get away from home.

Everbearing Strawberries

Prepare ground thoroughly. Make the soil very rich, if possible. Get true Everbearing plants. Progressive seems to be the best variety for general use. Get plants near enough so will not be in the malls more than a day or two.

Space the plants 12 to 18 inches apart in the row, and rows 2 feet or more apart, according to room to spare and whether to be worked by hand or with horse cultivator. Plants should be unpacked immediately upon arrival, and if ground not ready or weather does not permit of planting, don't worry, but heel the plants in, spreading the roots out well so each root comes in contact with the damp soil.

Before planting, take time to trim off all leaves and runners, except just several center leaves. Also, clip some off bottom of roots, if this has not already been done. Very early shipments may show little foliage, or none, as may have been taken up before new leaves started.

Set the plant so the crown is level with the ground. Avoid burying the crown, yet get all the root under cover. Spread the roots out like a fan, so soil comes in contact with each tiny root. Never jab them in with roots tangled and twisted. Pound or tramp the dirt very firmly about the roots, especially if cannot water at once and frequently. Water each plant as set, if can, and keep them wet thereafter, putting the water on the roots and not the tops, for best results. However, spraying seems to work pretty well also. Anyhow, keep them wet.

As soon as plants have begun to take hold, begin to hoe gently about them, being very careful not to disturb the roots. If plant is loosened, tramp it back in solidly. Having started with good healthy plants, the secret of success is to hoe or cultivate often and give them lots of water between cultivations. Another big secret of success is to get your plants in early. Any time in April and even early May will do, but the earlier the better, after ground is ready and can be worked. Even if you lose a few, you will be ahead because those you save will do so much better. It is not necessary to have large roots, as the original roots die anyhow, new roots forming after planting.

The hill method of culture is one of the best, where berries only are desired. Keep all runners cut off as fast as they appear. The original plant will produce additional crowns, forming a big bush, with strong fruit stems loaded with berries, under favorable conditions. By this method it is easy to cultivate all around the plant and much hand weeding is obviated.

The hedge row method consists of training the runners into the row or close to it, thus making a wide row, yet not allowing the runners to set plants clear across to next rows. This is also very satisfactory. New plants from the runners can be obtained in this way. If plants are wanted in large quantities, let the runners go out farther.

Keep blossoms picked off the first season until July to give plants a good start. Fertilizer may be dug into the soil between and around the plants at any time to advantage. Light coat of manure or other mulch is good, put on late in fall, but put very little directly on top of plants.

As to disease, there is little to be done, worth while. Better remove all sick plants. If too bad, start a new bed in new location, using healthy plants.

Give as Well as Take

Be a good sport. Don't expect your garden to do all the giving. Treat the garden to humus and fertilizer, also liberal cultivation, to keep it in good humor. Don't worry too much, though, if unable to obtain barnyard manure, which is very valuable and should be applied at least once in several years if possible.

But as a matter of fact, the soil is very resourceful and contains much plant food, even when sometimes apparently worn out. The trouble is, the soil is not in the right mechanical condition to liberate its plant food, or put it in such shape that the plants can get hold of and utilize this food. Thorough plowing or digging over, especially in the fall, and frequent cultivation helps to keep the soil in the desired condition. But what it needs also is loosening and mellowing that comes from incorporating with it the much talked about humus. Humus is most anything in the way of decayed vegetable material. Leaves, straw, lawn clippings, etc., make humus when turned under. They lighten and create the soil, improving it wonderfully for the plants, and making it ever so much easier to handle.

Much is said about applying well-rotted manure, and this is all right and good for most anything, but often there is little strength left in such manure. Fresh or coarse manure should be used liberally, especially in the fall. If plenty of water can be had during the growing season, you can use this coarser manure in the spring if well distributed and worked into the ground. In case bulbs are planted in such soil, see that they do not come in direct contact with the manured ground. Simply make the holes or trench large and line with clean soil or sand, covering bulbs an inch or so with same material, finishing with the manured soil. Better avoid planting asters in newly manured ground. Beware using fresh poultry manure, so that it comes very near plants of any kind or their roots. It is very strong and effective after exposed a while or after being mixed with the soil some months in advance of planting, but it will sure burn the plants if fresh and gets close to them.

Commercial fertilizers are helpful, but lack humus. Used alone, and repeated for some years, they are bad for the soil. This alone is a chapter too big for me to tackle here. Use some, if you wish, but experiment and watch results. Bone meal is very strong, and good to use, raked into soil before planting, but use sparingly. Your dealer will suggest its uses. I am inclined to think that pulverized sheep manure, to be had dry, in large bags, is one of the best solutions for the small garden. Can be used all season by working it into the soil as a top dressing close to the plants.

Still another method may be employed to enrich your garden and keep the soil fit. This is the green manure or soiling method. The idea is to turn under a rank growth of vegetation, preferably peas, as peas gather nitrogen from the air and store it in the ground for use of future crops. The decaying green crop adds humus. If space permits, it is well to plant part of it to some such crop to be turned under. Or, often ground may be vacant for only part the season. Sow something on it and turn the partially grown crop under. Rye is used a good deal also. Don't keep the home fires burning out in the street, when raking up the leaves in fall. Get them into your garden, held down with damp soil.

Pester the Pestiferous Garden Pests

Many of these pests come and go—are worse some years than others. We never know just what we may have to deal with before the season is over, but can be pretty sure will have trouble from some of them. So the sensible thing to do is to be ready to combat these undesirable citizens. "Do them as they would do you—but do 'em first." Have a sprayer ready.

First, we must understand that some pests will eat poison, on plants or put out as bait, while others, known as sucking insects, cannot be poisoned the same way. They must be destroyed by contact poisoning—the dope must be sprayed **directly on the insect**, and, when done right, gets his goat.

Other remedies or devices are repellants, anything having a vile odor, such as carbolic acid, kerosene, turpentine, etc. Or a substance making an irritating dust, as air-slacked lime, ashes, tobacco dust, will drive the intruders away for a time. The effect of these repellants lasts a short time only and may have to be repeated. Air-slacked lime mixed with flower of sulphur is recommended as one of the best repellants for some things. Fresh poultry manure placed close to but not touching squash plants sometimes halts the bugs. Young chickens running among the vines scare the bugs away.

Then there is physical violence, in which you go to it and pick the bugs off by hand or trap them and destroy them. The hard-shelled squash bugs may be trapped by laying pieces of boards or shingles near the plants at night. The bugs crawl under them and in the morning are sluggish, when may be captured and dealt with according to law! Aster beetles may be hand picked, as generally not a great many at a time. Some use slug shot for aster beetles.

For grasshoppers take 2 lbs. bran or corn meal, mix dry with 1 oz. Paris green or arsenate of lead. Then mix with this 2 tablespoonfuls of molasses and about 1 pint water to which has been added the juice of half a lemon. Mix all together and late in evening sow it very thin, making it into flakes almost like snow. This will prevent poisoning birds or animals. In a day or two you may not see any grasshoppers, dead or alive, and will think they did not take the bait but moved on. Careful search will disclose many dead grasshoppers hidden, for the reason when Mr. Grasshopper gets sick with a pain in his tummy he wants to be alone and drags himself off to some hidden spot.

Cutworms. The same mixture is also used for cut worm bait.

Now for spraying. Practically all the insects that trouble our Western gardens, and that can be controlled by spraying, can be handled with only two kinds of dope. For poison spray use arsenate of lead, tablespoon to gallon of water. For sucking insects (lice or aphids) use as a contact poison "Black Leaf 40," one teaspoonful to a gallon of water, or Sulphur-Tobacco soap.

There are other preparations that will accomplish the same ends, but with these two and a good sprayer you can be master of the situation in most cases.

Kerosene emulsion may be used in place of Black Leaf 40, also there are other tobacco preparations, soaps, etc., that are good, though the Black Leaf 40 seems to be the most effective. To make kerosene emulsion, dissolve one pound of laundry soap in one gallon soft water and heat to boiling point. Remove from fire and add 2 gallons of kerosene

and stir vigorously. After this is cooled, add 10 parts water to one part the kerosene dope. This may of course be made in smaller lots, just so the proportions are kept about the same.

Sweet pea lice, or aphids, should be pestered with contact poison—Black Leaf 40, Sulphur-Tobacco soap. Don't spray with Paris green or arsenate of lead. Dashing the vines with hose discourages the lice.

Lice on cabbage may be sprayed with Black Leaf 40 or the kerosene emulsion. Throwing dust on the plants also helps.

Cabbage worms may be poisoned by spraying with the arsenate of lead solution until heads are half grown, with no danger of poisoning the heads, as grow from inside. Hot water, almost boiling, may be poured right on to the cabbage plants and will kill insects with which it comes in contact, yet does little or no harm to the cabbage. One gardener says he never fails to drive off cabbage worms by spraying or sprinkling the plants with water in which has been soaked some common tar paper. An experienced Brighton (Colo.) cabbage grower uses one lb. Paris green to 100 lbs. stucco, well mixed and shaken over the plants from a gunny-sack.

Tiny fleas that eat turnips, radish, etc., just when they are coming up, may be controlled by shaking air-slacked lime or tobacco dust over the rows from a loose woven gunny sack. Ashes also help some.

Small striped melon and cucumber bugs generally give way if plants are dusted with tobacco dust. Good idea to have several pounds handy.

Corn root worm can be side-stepped by not planting corn in same place two years in succession.

This subject is too big by far for me to more than merely touch upon. Get my 10-cent booklet, "Insects and Diseases." Price 5 cents to customers, or free with a \$3.00 order.

To Kill Ants in Garden

Select a time when the ants are all at home, holding a family reunion. With sharp stick, make a few holes about 6 inches deep in the ant hill. Pour an ounce or two of carbon bi-sulphide into holes. Cover the hill with an old carpet or a Sunday newspaper. The fumes work downward and do the work. Ants may be kept off of peony buds by sprinkling them (the buds) with common pepper.

Destroying Squash Bugs

"The squash bugs, like chickens, come home to roost. I found that in the early morning a very small area contained millions of them, so I hit on the plan of killing them with a blue flame gasoline torch, such as electricians use for soldering. In about an hour I killed about 98% of all I had and have not seen a colony in years, and scarcely ever see a single bug. There was no damage to the plants, as the bugs fall on the ground as soon as they feel heat and hear a noise."—H. J. Baldwin, Minnesota.

Prolong the Melon Season

Plant some Honey Dew melons to eat or sell after other musk melons or cantaloupes are gone. The Honey Dew can be had now in both green and salmon flesh. Both growing in favor from year to year. They can be picked and stored and kept for weeks after the usual "open season" for melons.

"Beat the Bean Bug"

Briefly, all you need to do is to provide a good sprayer (my \$1.50 sprayer will do for home garden, "Little Lenox" will help some), and some arsenate of lead (half pound or so) and have these on hand before the bugs show up. The full-sized bugs—the advance agents—that lay the eggs, do not, as a rule, do so much harm. Those small woolly fellows that hatch out under the leaves are the ones you need to get after and very suddenly, too.

Therefore, spray **UNDER** the leaves just before these rascals are able to "sit up and take a little nourishment." Several sprayings may be required. Spraying on tops of leaves is also worth while. Spraying soon as the big bugs come will help some. A bug can't eat and thrive if leaves all protected with arsenate of lead. Use a tablespoonful to a gallon of water. Keep well stirred or shaken up. Waiting to spray until after vines are riddled is like locking the garage after your Ford is stolen. If you spray at right times early, then you will not need to spray much if any after beans are well set. But the arsenate of lead may be removed from pods before cooking by washing them in water to which has been added some vinegar.

"In Old Cheyenne"

[By J. D. LONG]

In former days in old Cheyenne, when long horned steers the plains o'er-ran, and cowboys riding up and down, with whoops and yells shot up the town, the lawns as well as streets were bare; to have a garden spot was rare. But now while those exciting ways are kept in mind by Frontier Days, the folks in this historic place are giving weeds a merry chase, and planting flowers everywhere, with tree or shrub set here and there.

Upon the lawns so nice and green, fine pansy beds may now be seen; where rubbish once was left to rot, is seen the blue forget-me-not. Where nothing grew in days of old, blooms now the orange marigold; while scarlet flax and six-weeks stock both thrive beside the hollyhock.

The back yard gardens, too, are fine, and aid a lot when owners dine; they help to cut high living costs from early spring to autumn frosts.

The garden sash that you may raise in health as well as money pays. This "getting better every day" is very good in its own way, but Coue keeps a garden grand and works in it to beat the band. Your Doc will tell you for a fee 'tis good for you to plant a tree, and hoe, and rake, and putter round; with nature chum on her own ground. He'll tell you, too, regarding eats, to chew more greens and fewer sweets. So every day in every way you'll find this plan will surely pay.—Wyoming State Tribune.

Asters like a little shade. East side of the house is good. Even north will do, if no additional shade from trees. They also like new ground. Try spading up along the edge of the lawn for asters and other flowers.

Plant Fall Bulbs In Fall

Tulips, hyacinths, narcissus, crocus, etc., are for fall planting only. Cannot be supplied in spring. That is their season for blooming, after spending the winter in the ground. Ask for special fall bulb list if you do not receive a copy by Sept. 20th.

How to Grow Cannas

Cannas thrive best in warm climate, sandy soil, full sunshine all day, and with plenty of water. In general, they can be grown very nicely where corn will mature, but in localities with shorter seasons the space and labor might better be given to something else.

Canna bulbs or roots are slow to start, but make rapid growth later on when weather gets warm. The plants do not branch out, so can be planted closer than dahlias. Set the roots as close as 12 inches apart, if you wish. Plant soon as ground warms up, about middle of April to May 1st, or even later. Cover 3 or 4 inches. Frequent cultivation and plenty of water should be given.

After fall frost, cut tops off close to ground, dig and store safe from frost, in somewhat damp cellar. Or, if cellar is dry, sprinkle the roots once in a while during the winter. May be packed in boxes or set on floor. Throwing old sacks or papers over them will prevent drying out. Dirt may be left on or removed. Each spring planted single root makes a clump by fall. These are easily pulled apart the next spring before planting. Any piece with an eye or bud will grow, regardless of size, shape or appearance of roots.

The old small blossomed cannas are fast giving way to the newer, very larger "orchid"-flowering varieties.

Second Crop Shasta Daisies

If you allow your Shasta daisy blossoms to remain on the plants until they dry up or go to seed you will get but one crop. But cut them soon after blossoms well formed and they will keep on blooming, often until late in the fall.

Better Than Agreed

There are a number of biennials and perennials that are usually described as blooming the second year from seed, and not thought of as likely to compensate us any the first year. But it is surprising how some of these do bloom the first year also, especially if planted early, and often if not so early. Snap Dragons, Margaret Carnations, Sweet William, Delphinium and many others bloom very nicely the first season from seed sown outdoors. I was surprised to find splendid spikes of blossoms on a bed of Gold Medal Hybrid Delphiniums one fall from seed sown the last of June. Of course they do still better after the first season. As soon as your delphiniums are through blooming, cut the plants off. They will then bloom again the same season.

Consider Summer Mulching

Down south, and even here in Colorado, summer mulching can be employed to great advantage. This is simply covering the ground with a good thick dressing of straw, hay, or trash, after plants are pretty well grown. This keeps the ground moist, saves much watering, and winds up the season for weeding and cultivating. Understand, this is not to take the place of cultivation while plants are small, but is to be applied along in summer. It is especially desirable for such plants as dahlias, cannas, asters, and all such good-sized plants. Lawn clippings are good, too, as far as they go, but the objection is that you are apt to seed the garden to dandelions at certain times of year. Otherwise, you can't make better use of the clippings than to strew between the rows in garden.

PLANT SURGERY

Sometimes plants will be benefited by a minor or major operation, as suggested here-with. I'm not saying this surgical work is absolutely necessary, but have found it helps some in my own gardening.

Asters. Even though the seed is sown outdoors where the plants are wanted, you will get longer stems and better blossoms, as a rule, if you take up and transplant the plants. If two or more crowns show on one root, cut or pinch out all but one, before transplanting. Clip the tops of the leaves when transplanting. As soon as the first bud—the center or crown bud—appears, pinch it off. You lose one large blossom with a short stem, but gain by increasing the length of stems and size of blossoms of the main crop.

Cabbage. Cut off the tops of leaves—about one-third—when transplanting, unless plants are quite small. Some plants have two crowns. Pinch out one. Some are blind, having no crown. Throw such away.

Cannas. Divide the clumps that you take up in the fall. A small root will make a good plant and a clump of roots by fall.

Canterbury Bells. Pinch or cut off every blossom as soon as it begins to fade. Keep plants watered and cultivated and they will bloom again the same season.

Cobea Scandens. When the plants are 4 to 6 inches high, pinch the tops and they will thicken up and make a denser covering.

Dahlias. Here's where nerve is required. You may have the mistaken notion that if a small tuber is good then a big one is better and an undivided clump best of all. Absolutely wrong, especially regarding the clump. The clump **MUST** be divided if you want fine large blossoms. See suggestions elsewhere in "Garden Secrets" for dividing. Don't think you can yank off the tubers and that they will sprout from all parts like a potato. The eyes are all near the stem. Far better throw away the surplus, if do not have room to plant all the divisions, than to plant the whole clump. Better to give them to those who will appreciate and care for them.

To keep dahlia plants low and more bush form, and help to prevent their blowing over, pinch out the top when the first three pairs of leaves are developed. To get largest blossoms keep the plant pruned to only a few branches and then pinch off most of the buds, leaving the terminal one. Buds usually appear three in a cluster. Pinch off the two lower ones, leaving the center or terminal one. To make plants bloom their best late in fall, after the hot weather, cut the plant back within a foot of the ground along in July. New shoots or branches will develop and produce blossoms.

Daisy, Shasta. Cut them with long stems and a good deal of the foliage as fast as the blossoms come to full size. They will bloom again, and continue blooming if kept cut.

Dandelions. Cut the roots off just a little below the surface, as most people do when trying to rid the lawn of this pest, and the portion of the root left in the ground will make two or more dandelions grow where but one grew before, especially if you don't sow some clover and blue grass where the digging has been done. The grass tends to discourage the ambition of the dandelion root.

Delphiniums. Suppose to bloom once in a season, but by cutting them back as soon as they have bloomed you get another crop.

Gladioli. In cutting the flowers be sure to leave not less than four leaves to mature the bulb. Better leave six leaves or even more. Keep your glad bouquet looking fresh and cheerful by cutting off the faded blossoms daily, and at the same time cutting

an inch or two off the bottom of the stem. Make this cut on a slant. Change the water daily also. A glad bouquet should last at least a week, if spikes are cut when first blossom opens. Large gladioli bulbs may be cut into 2 to 4 pieces before planting. Peel off the husk. Cut so as to get a portion of the root surface, also an eye, on each piece. Each piece will make a good flowering plant and a nice new bulb. Dust the cut surface with powdered sulphur. The cutting should be done the same day of planting.

Grass, Lawn. Begin cutting the new lawn as soon as the grass is several inches high. Cutting seems to thicken it up. Good plan is to cut often and let the short clippings remain on the lawn. Some of the best lawns I have seen never have the cuttings taken off the whole season through. This mulch also combats the dandelions, especially preventing dandelion seed from getting a start. Will not kill old roots of dandelions.

Gypsophila. (Perennial or Baby's Breath.) You can prolong the season of bloom by cutting back some of the plants when they are six inches to a foot high. They come on again, but flower later than those not cut back. Gyp roots may be pruned severely when transplanting.

Hollyhocks. In transplanting hollyhock roots, prune them quite a bit. They send out many fine roots from near the cut surfaces. It even benefits roots not transplanted to dig around them in the spring, and shove a spade down so as to cut some of the branching roots. If tops have made much growth before transplanting, then cut back the tops almost to the crown. But don't cut off the blossom shoot if it is showing plainly.

Iris. Sooner or later your iris clumps should be dug up and the roots pulled all to pieces and reset. Some cutting may be required, but usually the clumps divide naturally and can be pulled apart. A small division soon makes a good sized blooming clump. That's why the price paid for a root of some new and fine kind proves a valuable investment. Better discard some the older, less desirable sorts, if room limited, and keep adding some the newer kinds. Avoid planting iris in same soil that has had iris before. If do not wish to change location of iris bed, then dig out the old soil and put in some new.

Melons. If size rather than quantity is wanted, then pinch off all blossoms and small melons but a few. Prune back the vines also. Same with other vine vegetables, such as pumpkins, squash, "cukes," etc.

Pansies. Often the tops grow too fast for the roots, if to be transplanted. Don't be afraid to cut or pinch back the tops if they are at all tall and "sprangly." It is not really necessary to keep the blossoms picked for several weeks after setting out the pansy plants, but picking the blossoms and buds closely will give you better plants for later blooming. And when any plants get quite tall and "loppy" and untidy looking, cut them right off to within 2 inches of the ground. Water and cultivate and within two weeks or so you will have blossoms again and better ones than if had not been cut back. If plants turn brown the chances are the red spiders are at work. At first appearance of this, cut back the plants partially at least, so you can get at them from all sides and beneath the foliage with the hose. Give them a good sharp spraying daily and you will beat the spiders in their game.

Peonies. The clumps of peonies do not require dividing often, but if taken up the roots should be cut into several parts, each with several eyes. For some reason or other a large peony root seldom makes good when

transplanted. Best results come from small divisions. Largest blossoms can be had by disbudding. Leave only one bud to a stem.

Petunias. Make them bushy and sturdy by pinching off the tops when the plants are a few inches high. Or, good size plants may be cut off and new shoots will develop, making a large bush.

Roses. The following suggestions I have taken from a helpful book, "How to Grow Roses," published by Conard & Jones, West Grove, Pa. Price \$1.25, prepaid. Better send to this firm and get the book, for it gives many details I have not quoted.

Two and three year old plants should be cut back severely at time of setting out, in spring. Leave only 3 or 4 buds on Hybrid Perpetuals and about 6 on the Teas and Hybrid Teas. Cut stem just above a bud that points out. Pruning determines the size and quality of the flowers.

Hybrid Teas and most other hardy roses should be pruned in March. The tender roses, Teas and Hybrid Teas, need not be pruned until April, when the sap begins to flow and buds begin to swell.

If few but extra large and fine flowers are wanted then cut out to the base all but three to five shoots and cut these back so as to leave only 2 or 3 eyes to the shoot. The more shoots you leave and the longer you leave those that remain, the more flowers you will get, but they will be smaller than if less shoots are allowed to grow and these cut back nearer to the ground. In cutting out shoots, always remove the old ones and leave those of the previous season's growth. This is recognized by its fresher, smoother, and lighter colored appearance than the old wood. The strongest shoots should be saved, and care given to placement of these that will produce a symmetrical bush.

Sweet Peas. Plant surgery should be employed daily on your sweet pea vines after they begin blooming. The more you cut the more you have and the longer the season of bloom. Like many other flowers, sweet peas were never intended for stingy folks. The more you cut and give away the more you have, and the longer they keep blooming. Try picking sweet peas without cutting, but instead of pulling the stems away from the stalk, push towards it.

Swiss Chard. "Eventually, why not now?" Slowly, many gardeners are learning the value of this plant. As noted elsewhere, Swiss Chard is useful in several ways. It is one of those "cut and come again" vegetables, but instead of cutting off the entire plant you just cut or pull off the outer stalks. New ones keep growing from the center so that a continuous supply of greens may be had all summer and fall, from an early spring sowing. But Swiss Chard may be sown any time until along in July.

Tomatoes. If growth is rank it is well to keep the plants pruned back so as to develop larger fruits.

Thinning. Don't neglect thinning so as to give each plant enough room to develop well. I don't know of any set rule, for much depends on what is to be thinned. But watch your rows and begin thinning early, leaving the strongest plants. A second thinning may be desirable, or even a third. Often in thinning you can transplant and fill in vacant places. Always water transplanted plants at once.

Strawberries. In setting out strawberry plants, cut off the tips of the roots. Many new, fine, hair-like roots will develop on account of this operation. And the tops should also be trimmed back so that just several crown leaves show. If plants are taken up real early in spring, they may yet be dormant, with no green leaves showing. Though apparently dead they do splendidly if set out at this stage, provided the ground does not freeze before they get rooted. Too

much freezing of the ground may cause failure, but mere frosts do no harm to plants wintered in the open with no covering.

Sunflower. A neighbor's cow gave me a little interesting demonstration in plant surgery. She reached through my fence and ate off all the leaves and branches of some fine double Chrysanthemum-flowered sunflowers I had planted for display along the north side of my home garden. It looked like a case of "All is lost," but I just let the naked stalks remain and kept them watered and cultivated. They soon sent out new growth at the joints and before fall were fine symmetrical, bushy plants, with many branches loaded with golden double flowers.

In this connection I recall an experience with zinnias, reported me by a good customer, Mr. Samuel Yaggy, at Syracuse, Kansas. He said that when his zinnias were several feet high a hail storm cut them down so just the bare stalks remained. But to his great joy Nature came forward with an armful of spare parts and fitted up those plants so they bloomed gloriously after all. That's one thing about damage from hail—we should never be too sure that all is lost. Often Nature will come to the rescue and save the day.

Put the Garden to Bed

Here's where you need to "use discretion."

In providing winter protection for plants, many gardeners overdo a good thing by applying too much cover. Get the idea, once for all, that the protection is not so much to keep the frost out as to keep it in, and you will have better "luck." It is the drying out of the soil, the alternate freezing and thawing, and the whipping by the winds, that harm our plants in winter. And, strange to say, the danger is greater in our mild Colorado climate than in some much colder sections. This for the reason that where snows come early and remain all winter the snow gives the needed protection.

In our section, we cover raspberry bushes completely with soil, after bending them down as close to the ground as can be done without breaking them. This should be done before the leaves have fallen. Some cover grape vines the same way; others let them rustle for themselves. It is hardly necessary to cover grapes. Strawberry plants usually come through fine with us, with no winter protection, but if you do mulch them with straw or coarse manure, be sure to put most of the covering between the rows and plants and very little, if any, on top of them. A little coarse covering on top is good, but be careful. Don't smother the plants with heavy coat of manure.

Pansies usually live over if covered and cared for as suggested in my special instructions for growing pansies, given on another page.

About all I use for putting my gardens to bed is excelsior, dahlia and zinnia stalks. Nothing very heating about these, thrown lightly over the beds. Yes, leaves are good for some things, but apt to smother such plants as pansies. I never use them on such small plants. They are all right to work in around rose bushes and other shrubs. Some protect roses by forming a mound of dirt up around each plant, 10 to 12 inches high, just before the ground freezes. Later they may put on a covering of straw or leaves. Or, the latter may be used without the hilling up.

Be sure to anchor all covering, if you have winter winds like we do here. By leaving some dirt on the Colossal zinnia roots and turning the root end of the plant west, toward the prevailing winds, these seldom blow off. The excelsior is held in place by poultry wire, well staked down. Where available, pine boughs are excellent, or even brush without foliage will answer for many things. Peonies, iris, gypsophila, need no protection.

Rotate Your Crops

That is, don't plant same kind on same ground year after year. Different plants take different things from the soil, to some extent. Different pests attack different plants (some living over in location where operated the previous season). Plant root crops where peas and beans were last year. Plant tomatoes where corn was, etc.

How to Grow Onion Sets

Ordinary sets (bottom sets) are nothing more than regular onions grown so close in the row that they cannot grow to large size. Withholding water also prevents their growing large. The seed is sown in rows, but the rows are made wider, 3 or 4 inches, instead of the usual narrow row. Long experience and judgment are required to produce sets well-matured and of ideal shape, but this is worth experimenting with on a small scale. 80 to 100 lbs. of seed to the acre are used for commercial set growing. For small garden use, an ounce for 25 to 30 feet of row—wide row. Red Wethersfield is used for growing red sets; Yellow Danvers for yellow, and Silverskin for white. Brown Australian and Mt. Danvers are also good.

To Make Head Lettuce Head

Use any heading variety I list, although Denver Market and Prize Head seldom make true solid heads. Iceberg and Hanson are fine for home garden, as both can be used as leaf lettuce also. Los Angeles is best for market. Fine for home, too.

Lettuce will seldom head in hot weather, unless grown in shade. It is a cool weather plant, doing best very early in spring, or late in fall, as head lettuce. The cool climate of the mountains is ideal for head lettuce. That's where the carloads are now grown for shipping. This is becoming a big and profitable industry in Colorado.

Sowing head lettuce seed late in fall, just before ground freezes, is one good way to get an early start the next spring. Very early spring sowing—March or early April, is good. Bear in mind that the ground should be good and rich, and that the plants should be thinned or transplanted to 6 to 10 inches apart. Then they should be hoed often, the oftener the better. You can't expect to pluck large solid heads of lettuce from a bed in which the plants are as thick as the proverbial hair on the proverbial dog's back.

Peony Pointers

Although we might like to buy and plant big clumps and have them bloom freely the first season, yet this is not Nature's way. Plant divisions any time in fall or very early in spring. Fall is best. There is some advantage in planting strong one-year or two-year plants, but larger clumps will be a disappointment. Size of divisions often misleading. A small division from a 2 to 4-year-old plant is often better than a larger one from an older plant. Size of root not so very important either, as new roots are formed. Takes several years for peonies to show true to name blossoms.

Never neglect the peonies after they have bloomed. The care and regular watering you give them after blooming until fall produces, vigorous buds that will insure large and fine flowers the next year. As one peony grower sees it, the roots may be likened to storage batteries, which should be charged after blooming for the next flowering season. Fertilize by spading in manure around but not very close to peony plants. Never let the manure get close to roots or on top of the plants. This is important.

Doctoring Sick Plants

Do all you can to keep plants healthy, nipping insect attacks in the bud, so to speak, and promoting steady healthy growth by sensible care and cultivation. After a plant gets very sick, you'd better remove and destroy it, than spend much time trying to bring it back. Sure, there may be exceptions.

Would You Chew Wood?

You'd have a fit if the Missus would serve kindling and twine with your radish, turnips, beets, snap beans, etc. Yet many times these are served old and tough, and full of woody fibre and stringy entanglements. To avoid this, use vegetables when young and tender. To have them so when wanted, plant often. Don't think of planting radish, beets, beans only once. Plant every few weeks and see how nice it is to have them crisp, juicy and tender.

Iris—The Foolproof Plant

Give the iris half a chance and it will grow and thrive. Roots should be planted very shallow, just so well covered. Plant most any time of year, except when in bloom. Fall is ideal. Early spring is O. K., too. Iris needs only a small amount of water to do splendidly. Will thrive under rather dry and unfavorable conditions. Is a boon to dry farm gardens. A small division will sometimes, not always, bloom first year, and do fine after that. In a few years it produces a large clump which may be divided and re-set, making a dozen iris grow where only one grew before.

Cinnamon Vines for Shade

They make a nice background by training the vines over fences and unsightly objects. By planting the largest size roots and planting them early, the vines will provide more shade the first year than most anything else. And after the first year they do still better. Roots remain right in the ground, so one planting is the total expense and trouble. In very severe climates, it is well to mulch the roots for the winter. Plant the roots nearly a foot apart, laying root flat, and covering about two inches. Use large roots for best results. Unlike a dahlia root, the cinnamon vine root will grow even if broken into several pieces—each piece will grow. Quicker growth is obtained, however, if the terminal eye on small end is retained. Very slow to start. Be patient. Better mulch first winter.

"Keep the Ball A-Rolling"

The old idea with many folks was to have one big spring gardening spasm, followed by spasmodic cultivation and let it go at that. But now, with garden space so valuable, and produce from the garden so expensive, and also more appreciated when it is fresh, we are learning how to get the greatest efficiency from our gardens.

Companion and succession crops are planned, to use space to best advantage and for as long a portion of the season as possible. Companion crops are early and late maturing kinds grown in alternate rows, so that when the early crop is off the late one may occupy the whole space for balance of the season. For instance, early radish, beets, lettuce, may go between rows of cabbage, tomatoes, squash or melons.

Succession crops are those following each other. The ground used for green onions from sets, radish, lettuce or early peas, may be used after these crops are off for celery, late sweet corn, beans or turnips. Two, three or even four crops of some things may be grown one after the other in a season.

LONG'S Random Remarks

Forget it. You can't expect to cut asparagus from a newly set bed. Should be cut very little, if any, even the second season. That is, if you want a good permanent bed that will deliver the goods. See page 6 of Hand Book.

Try planting morning glory and castor bean together. Thin to one plant of each in a hill.

Tomatoes thrive best in loose soil. Try digging large hole for each plant, and filling bottom with chopped sods. Avoid tramping ground close to tomato hills. Tomatoes respond to rich soil. They do not require great quantities of water.

Get most of your peas in early. Peas do best in cooler part of the season. Beans, however, thrive all summer until killing frosts. Here at Boulder we plant beans up to July 15th, and even as late as Aug. 1st.

Carrots do not require a great deal of water if well cultivated. Too much water often causes them to split open and rot. Make sowings up to middle of July for nice tender table carrots.

You can grow your own cabbage plants by sowing the seed right outdoors for main fall crop. Sow in April. Thin when small so each plant has room to become sturdy before being set out. If sow seed late, then use an early variety. Nothing better than Copenhagen Market.

Turnips grow fast. Sow from early spring to Aug. 1st. About July 15th to 25th is best for main fall or winter crop. Odd corners and ground from which early crops have been removed may be sown to turnips. Be sure to thin them early, if very thick.

Spinach is a cool weather plant. Runs to seed in hot weather. That is, the usual kinds do. Try New Zealand for hot weather. Common spinach should be sown very early in spring. Better yet, sow in fall, either in September and let it get a start in fall and winter over, or just before ground freezes, so will come up early in spring.

Are you growing salsify (vegetable oyster)? If not, why not? Just fine for soup. Plant April or May. Thin to 2 inches, so as to get fewer roots but larger ones. Small roots are harder to clean and prepare for cooking.

Cucumbers grow to beat the band in warm weather. May be planted up to Fourth of July, or even later.

Ever grow Kohl Rabi? Take a chance on a nickel package.

I know a good gardener who plants his melons twice, whether they need it or not. First planting is made early. If escapes frost, he has an early start. But the second planting is in same rows, but made a week or so later. In case the first planting freezes off, the second one is there all ready to pop through, and comes on earlier than if the patch were replanted after frost. Cost of seed is a small item compared with results from early crop. If both lots escape frost, the late one is hoed out.

My sales of Swiss chard are increasing by leaps and bounds, as people learn to appreciate this vegetable. Read about it in catalogue. After serving all the different purposes mentioned there, the roots can be taken up late in fall, transplanted into boxes and put in cellar near window. Will go on growing and providing splendid crop of greens for winter use.

Table beets should be planted every few weeks up to middle of July, to supply nice tender young roots as wanted all summer, and for canning. A great big "whopper" beet may be all right for exhibition purposes or to feed cows and chickens, but for table use the beets should be pulled when only partly grown.

In setting out an asparagus bed, make the rows 2 to 3 feet apart, and set plants 12 to 15 inches in row. Make a trench so the plants may be set just deep enough that the crowns will come 3 or 4 inches below level of ground. Spread the roots out flat, instead of jabbing them down straight. Fertilize the ground heavily each year between the rows, digging the manure into the soil. Don't waste effort filling deep trench with manure, as the roots do not go down deep. Fertilizer on top will seep down to the spreading roots.

Cauliflower heads best late in fall. You can grow your own plants from early-sown seed out in the garden, same as mentioned for cabbage. Tie the cauliflower leaves up to protect the head and keep it white. Do this when head is yet small.

Everlasting flowers are very popular now. Great quantities are grown and sold to florists, flower stores and art shops, for basket work and winter bouquets. See additional suggestions in my catalogue.

Rutabagas take longer to grow than turnips, so latest planting should be made not later than early July.

Get the jump on the garden pests by having a sprayer and several kinds of dope on hand before the pests show up. "A shot in time, saves nine."

Very early plantings, when ground is still cold except just on top, should be shallow. If seed gets down too deep in the cold wet ground it may rot. But later, when soil is warmed to a greater depth, you may plant deeper. In this connection it seems reasonable to suppose that we should not plow or spade ground deeply early in spring and plant at once in the soil that has been turned up from below, and has not yet had time to warm up. This is another reason for fall planting. Plow or spade deeply in fall, then give the top shallow spading or cultivating before planting in spring.

How do you transplant tomato plants? Do you just cover the portion of the plant that was in the ground before? Set your tomato plants very deep, so that more than half the plant is under ground. Some large and lanky plants should have three-fourths their length under ground. Pinch off all leaves except the few to remain on top of ground. If plants are extra large or tall, lay them on a slant in shallow trench, thus keeping all parts near the warm surface. Tomato plants take root all along any part of plant covered. Tops are not whipped and broken by winds when set this way. Set other plants deep also, just so you don't cover the crowns. Always water them at once, if possible.

Here's where many gardeners make a mistake: They think that rich soil is necessary to germinate and start seeds in boxes indoors or in hotbeds. Seeds require just heat and moisture to germinate. Given these conditions they will germinate with or without soil. In trying to make soil very rich for starting plants indoors, one is apt to burn the tiny plants. Use just any fine loose soil at first, and give rich soil after setting out in the garden. That's the principle I work on with my hardened pansy plants. No manure is used in the seed beds.

To cut down, or even eliminate entirely, the cost of onion sets, try this: Along in July or August sow a few rows of onion seed, just any kind you like. Let these partly grown onions remain right where they are over winter. Late in fall throw some brush or other coarse covering over them, or mulch with manure between the rows. The onions will start new growth early the next spring and make early green table onions. Even large onions may be left in the ground the same way for green onions the next season. But they will not grow on to make large dry bulbs for the next fall. White Silverskin is fine for this late summer sowing, though Mt. Danvers or any other variety will do also.

Theoretically, if you plant extra early, medium and late varieties of peas at the same time you will have a succession, one variety maturing after an earlier kind has come and gone. But in practice it doesn't always work out this way. Too many are likely to come on at about the same time. Better make some plantings a little later, sowing the extra early ones first. Try Ameer (Giant Alaska) planted just as early as the ground can be worked nicely. Then a little later, and when ground is warmed up somewhat, plant Laxtonian or Blue Bantam. In a week or so put in some Dwarf Telephone or Defiance, or some other medium to late varieties.

In very small gardens it is not advisable to use space for squash, pumpkins, or even sweet corn, for there are many other things that will produce much more valuable vegetables on same ground. Let the large gardeners and farmers grow some of these vegetables which require considerable room.

Never plant just one row of corn. No matter how few hills you may have, arrange them in blocks, several hills or more each way, so the ears will stand a better chance of being fertilized. Otherwise the ears may be only partially filled.

Try this for germinating parsnips and other seeds you have had trouble getting to grow. Make a small trench the right depth for whatever seed you are sowing. Nearly an inch deep would be all right for parsnip. Now wet the bottom of trench thoroughly. Sow the seed. Cover as usual, with soil not muddy. Sprinkle the covered row, so covering is well moistened. Bither keep row just moist by light sprinkling, or as soon as top dries a little, run over it with the rake to break the crust and make a dust mulch. Running a small furrow next to the seed row, and letting water run down it, is another way of insuring sufficient moisture.

Heavy, stiff clay soils, or, in fact, most any kind, can be loosened and improved by sprinkling a pound of lime to 10 square feet and working it into the soil ten days or more before planting. Do not use lime and manure the same season.

Some Sources of Supply

For ornamental trees and shrubs, Rockmont Nursery, Boulder, Colo.; Sutherland Nurseries, Boulder, Colo. For fruit trees, berry bushes, etc., Colorado Nursery, Loveland, Colo. For certified Grimm alfalfa seed, ask your dealer to order a supply from Idaho Grimm Alfalfa Growers Association, Blackfoot, Idaho. Or, write this firm asking what seedsmen they have supplied. For information regarding any good-sized town and surrounding territory, write to secretary Chamber of Commerce in such towns. Is surprising what a lot of interesting information you can get in this way. Most towns have some such organization that gladly supplies folders, booklets, and answers special inquiries, without obligation to you.

The Long and Short of It

Mr. J. W. Valentine, a Boulder hardware merchant, enjoys a joke, especially if it's on the other fellow. So one day he handed me this clipping: "An optimist is a man who believes that the seed he plants in his garden will grow and look as good as the picture on the package." This is just one of the many jokes about the great discrepancy between a vegetable or flower as described by the seed man and as produced by the customer.

And it would be funny, too, if it were not so serious. Now listen! You must remember that we seedsmen talk about what can be produced under favorable or ideal conditions. How many seeds are planted and come through the season under such conditions? The object of these Garden Secrets or talks is to help provide such favorable conditions. It's amazing indeed to see what a great difference there is in results from same package of seeds grown under different conditions. In spite of all former experiences along this line I had an illustration in my own garden not long ago that stunned me. It came about in this way:

When sowing some of my Special Mixed aster seed one day in May, I chanced to spill a little of it at the end of a row, and close by a small apple tree stump. The ground was hard, and received little moisture, as was just out of range of my overhead sprinkling pipes. Several seeds germinated and the plants grew—but not so you could notice it very much, as the saying goes. Two of them, a pink and a lavender, actually bloomed. The blossoms were true to type and color, but miniature ones, and the plants less than three inches high. Out in that garden, from the same package of seed, were plants 30 inches tall, with many side branches, all loaded with large blossoms. I just thought, "Now what would a customer think if his asters behaved like the starved, neglected ones near that stump did for me; or, even if they did somewhat better, but failed to come up to my enthusiastic descriptions of these asters as I know them, under favorable conditions?" The tall or long results were out in the garden. The "short of it" were in "No Man's Land."

What About Roses?

I imagine I hear this question from some of you. I'll say frankly that what I don't know about roses would be mighty interesting and helpful reading. I find, however, several rose catalogues that give considerable space to growing and care of roses. Send for these free catalogues, to addresses as follows: The Dingee & Conard Co., West Grove, Pa.; Geo. H. Peterson, Fair Lawn, N. J.; Conard & Jones Co., West Grove, Pa. The latter also sell a book, *How to Grow Roses*, for \$1.25, prepaid. The De La Mare Co., address given elsewhere, also sell several books on roses.

Farm and Garden Magazines

A good farm or garden magazine, or several of them, will help you still more to "wise up" on these subjects. Hardly know where to begin or leave off in giving a list, as so many good ones. Try any of these: *Western Farm Life*, Denver, Colo.; *Nebraska Farmer*, Lincoln, Neb.; *Montana Farmer*, Great Falls, Mont.; *Nebraska Farm Journal*, Omaha, Neb.; *Mail and Breeze*, Topeka, Kan.; *Wyoming Stockman*, Cheyenne, Wyo.; *Boulder County Miner and Farmer*, Boulder, Colo.; *Flower Grower*, Calcium, N. Y.; *Garden Magazine*, Garden City, N. Y. Write any these publishers for their prices.

Free Government Bulletins

Read every word regarding how to get these bulletins, and avoid disappointment. Don't send to me. I cannot supply them.

There are two ways to get these bulletins free; and one way to get them at 5c each, in case free lot is exhausted.

Bulletins will be sent you free (not over 10 to one person), by the Department of Agriculture, Division of Publications, Washington, D. C., or by your U. S. Representative or Senator. They may be bought for 5 cents each from Superintendent of Documents, Government Printing Office, Washington, D. C. A list of several hundred bulletins will be mailed you upon request to the Department of Agriculture, Division of Publications, or your Congressman. For your convenience, and to save time, I give you the following list of the best and most needed and helpful bulletins. Just address a postcard to any of the foregoing free bulletin sources, asking for those you wish, giving number and name of each bulletin. If free copies cannot be had, then order at 5 cents each from the Superintendent of Documents.

329 Asparagus. **254** Cucumbers. **282** Celery. **195** Annual Flowering Plants. **218** School Gardens. **1037** Beautifying the Home Grounds. **354** Onion Culture. **433** Cabbage. **1211** Home Canning of Fruits and Vegetables. **544** Pop Corn for the Market. **668** Squash Vine Borer. **739** Cutworms. **750** Roses for the Home. **766** Cabbage Worms. **879** Home Storage of Vegetables. **914** Melon Aphids. **921** Liming of Soils. **1007** Onion Trips. **1027** Strawberry Culture in West. **1028** Strawberry Culture in East. **1038** Striped Cucumber Beetle. **1044** City Home Garden. **1074** Bean Ladybug Control. **1163** Dry Farming. **181** Pruning. **289** Beans. **414** Corn Cultivation. **511** Farm Bookkeeping. **690** Field Peas. **740** House Ants. **747** Grasshoppers. **771** Homemade Fireless Cookers. **823** Sugar-Beet Syrup. **830** Marketing Eggs by Parcel Post. **887** Raspberry Culture. **920** Milk Goats. **944** Web Worms. **1126** Sudan Grass. **1182** Farm Inventories.

Listen! Order these bulletins as I have indicated. Don't order from me. I can't get them for others.

Your "Aggie" College Will Help

In addition to the bulletins to be had from Washington, D. C., you can get many helpful bulletins and suggestions from your State Agricultural College. Write them and ask for list of free publications they can supply.

Furthermore, write these colleges asking for information concerning your special farm and garden problems. I receive many inquiries that should be sent to the Agricultural College. I can't give the time to answer, even if I had the data at hand, but the college is at your service and is paid for this work. You will find the professors very obliging in such matters.

Some states do not have separate Agricultural Colleges, but handle this work in connection with their universities. In either case, just address your inquiry to **Agricultural College**, to town or city I give herewith, and you will reach the department you wish. Here are the addresses of some of our western state "Aggies":

Colorado, Fort Collins. **Idaho**, Moscow. **Iowa**, Ames. **Kansas**, Manhattan. **Minnesota**, St. Paul. **Montana**, Bozeman. **Nebraska**, Lincoln. **North Dakota**, Agricultural College. **Oklahoma**, Stillwater. **South Dakota**, Brookings. **Texas**, College Station. **Wyoming**, Laramie.

Ten Splendid Booklets

To give you additional garden and farm help at little or no expense to you, I have made arrangements with a Middle West seed firm to supply me with ten booklets. The price of each booklet is ten cents. I buy them at wholesale, and will supply my customers on the following terms:

Five Cent Offer. If you send me an order, no matter how small (though I trust you can make it a dollar or so, at least), I will send you any of these booklets at five cents each. Buy as many as you wish at this price.

Free Offer. Send me an order, amounting to \$3.00 or more and I will include any booklet free. You may buy as many more as you wish at the five cent price.

Now don't judge the value of the booklets by the low price. Honestly, I have bought books for a dollar or more that do not give as much helpful information as **No. 1: Hand Book for the Garden**, for instance. The other booklets are also very valuable.

If you get just one, then get the **Hand Book for the Garden**, as it covers the most subjects, and is the all-around garden booklet. Has 46 pages and cover. All have strong, durable paper covers that will last for a long time.

No. B1, Handbook for the Garden. This deals with growing of both vegetables and flowers, including fall bulbs. Tells how to make and handle hotbeds, coldframes; gives tables for amount of seed to sow, number of plants to fill circular beds, etc., etc. Gives the "once over" to subjects treated in detail in some of the other booklets.

B2. Onion Culture.

B3. Cabbage Culture.

B4. Corn for the Northwest.

B5. Silage and Silos.

B6. Potato Culture.

B7. Insects and Diseases.

B8. Profitable Poultry.

B9. Alfalfa.

B10. Meadows and Pastures.

Any booklet to any customer at five cents each. To others not customers, ten cents each. One free with order for \$3.00 or more, if requested. All prepaid.

Start a Garden Library

I'll give you the address of publishers that make a specialty of all sorts of books on gardening, and related subjects. They can supply books from ten cents to ten dollars each, most of the books being handsomely bound and a credit to any library. Get their catalogue, and order direct from the publisher, any book that you need. Address your inquiry for garden book catalogue to: **A. T. De La Mare Co., 438 West 37th St., New York City.**

Fall Bulb Leaflet Free

With each order for fall bulbs, I include my own leaflet of instructions, free. Or, copy will be sent anyone for 2-cent stamp.

Write "Aggies" In Other States

Not only write your own college, but if you want information about where to secure seeds, trees, etc., in some other state, write the college in that state. For instance: A man out on the Pacific Coast wanted to get some tree seeds of Colorado trees. He wrote me for information. Wasted his time and mine. I told him to take this up with our Agricultural College. That's their job.

LONG'S Business Terms—Read Before Ordering

Safe delivery guaranteed.

All goods prepaid, unless otherwise noted.

Cash with order, or C. O. D. Please do not ask for any other terms. Your check O. K. with us if O. K. at your bank.

C. O. D. orders. Bear in mind that C. O. D. orders cost you extra for collection and M. O. fees. On orders for perishable items, also heavy packages of other goods, we require one-fourth cash. Balance may be C. O. D.

Goods priced prepaid will be sent by parcel post or express, usually parcel post. If you specify a certain way and the other is cheaper, you pay the difference.

When small lots are mailed beyond 4th zone we reserve the right to weigh in envelopes and bags to avoid excessive postage on such items as peas, beans, corn, onion sets.

We ship promptly, or notify you if goods are to be sent later. So if you fail to receive goods or a notice within one week, please drop us a line at once. Don't wait. If your order or the goods have gone astray the sooner we know it the better.

I want you to report errors. Just drop me a line stating the trouble. That's enough. Don't need to sass me.

NON-WARRANTY—Owing to many conditions that may prevent the best seeds from growing and giving satisfaction, we, the J. D. Long Seed Company, therefore, in common with other seedsmen, give no warranty, expressed or implied, as to growth, description, quality, productiveness or any other matter of any seeds, bulbs or plants that we send out, and we will in no way be responsible for the crop. If the purchaser does not accept the goods on these terms they are at once to be returned, and the money will be refunded.

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Double "Rose" Hollyhocks

Their double blossoms rival the rose in exquisite color and form.

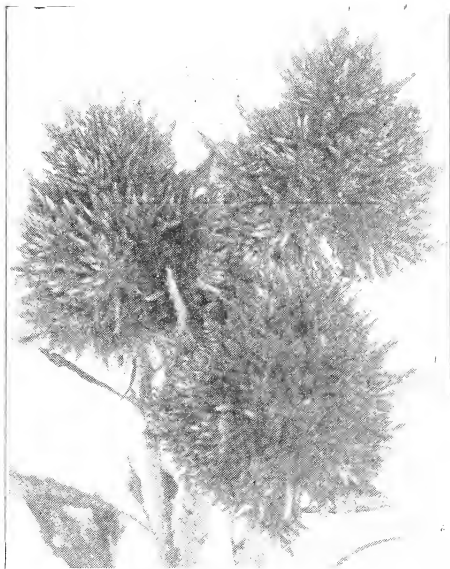
These hollyhocks bloom second year from seed. I offer year-old roots that will bloom this season. Plant early for best results. Colors: Rich Red, Snow White, Bright Yellow, and Newport Pink, 3 roots for 50c, 8 for \$1.00; each color labeled. Mixed colors, our selection, not labeled, 12 for \$1.00. All prepaid. Seed, any color or mixed. Pkt. 10c.



Mexican Fire Bush

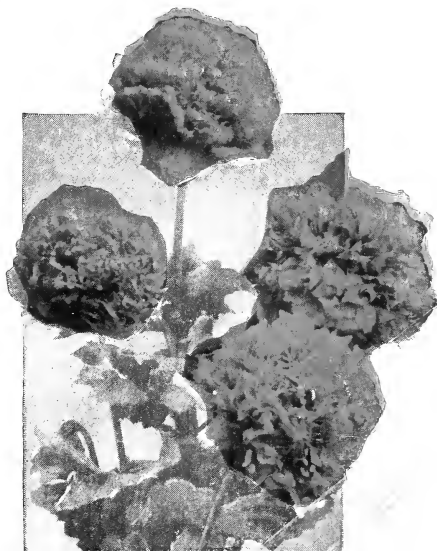
Very symmetrical quick growing plant, 2 to 3 feet tall, resembling a small, bushy evergreen tree, in summer, but turns red in fall. Attractive for hedge or background. Improved strain. Pkt. 10c.

CULTURE. Sow out doors early in spring. Cover 1-4 in. Thin to 2 or 3 feet. Or, may be started indoors.



Chinese Wool Flower

The flower resembles a ball of wool. Plants branch freely and are covered with blooms. Very striking for garden display. Can be dried for winter bouquets. Sow in garden about May 1st, or start indoors. Easy to grow. FO26 Crimson. FO27 Rose-Pink. FO28 Yellow. FO29 White. FO30 Mixed. Price for any color or mixed: 10c.



Peony-Flowered Poppies

Gigantic blossoms much like a rare double peony. Last year I sent out samples of this in the delightful Shrimp Pink color. This year I can supply the Shrimp Pink, also all colors mixed, of this famous strain at 10c a packet for either the Shrimp Pink or the mixed colors. Easy to grow. Sow out doors. Thin to 6 inches.

LONG'S



Superb Giant Asters

Boulderado Beauty Giant Asters

Similar in type of flower (see illustration above), and growth, to the Late Branching Asters, but the large blossoms are produced on much larger and heavier stems, with few side shoots.

Plants very vigorous, 30 to 36 inches tall; flowers, immense and fully double, are borne on long, strong stems, and last two to three weeks after cutting.

A20. Shell Pink A21. Rose Pink
A22. Lavender A23. Purple
A24. White A25. Mixed

Price for any color or mixed: Pkt. 15c; 2 for 25c.

Royal Asters

A strain of early Giant Asters, especially valuable for cut flowers on account of their long, strong stems that are almost free from side branches.

A12. White A13. Purple
A14. Shell Pink A15. Rose Pink
A16. Lavender A17. Mixed
Pkt. 10c.

American Beauty Asters

A18. Immense flowers almost identical in color to the famous American Beauty rose. The branches are exceedingly long and free from side shoots. As a cut flower it is simply wonderful. Pkt., 10c. 3 for 25c.

For other delightful varieties see page 32

THE J. D. LONG SEED COMPANY
BOULDER, COLORADO